REPORT RESUMES

ED 012 807 88 AA 000 167

SPECIAL ACTIVITIES SUPPLEMENTAL TO AND RELATED TO THE ART PROGRAM AT DEEP RIVER OUTDOOR EDUCATION CENTER.

GARY CITY PUBLIC SCHOOL SYSTEM, IND.

PUB DATE 5 MAY 67
EDRS PRICE MF-$0.50 HC-$4.80 120P.

DESCRIPTORS- *SUPPLEMENTARY EDUCATION, *FIELD TRIPS, *ELEMENTARY EDUCATION, *NATURAL SCIENCES, *MATHEMATICS INSTRUCTION, SOCIAL STUDIES, PHYSICAL EDUCATION, *LANGUAGE ARTS, *ART ACTIVITIES, *GRADES,

A CURRICULUM GUIDE DEALING WITH VARIOUS SUBJECT AREAS WAS PREPARED FOR POSSIBLE STUDY ACTIVITIES THAT WOULD USE THE LEARNING RESOURCES AVAILABLE AT THE DEEP RIVER OUTDOOR EDUCATION CENTER IN GARY, INDIANA. ACTIVITIES GUIDES ARE PRESENTED FOR (1) ART ACTITIVIES RELATED TO DESIGN, COLOR, LANDSCAPE REPRESENTATION, PAPER CONSTRUCTION, DRAWING, PRINT MAKING, ENAMELING, AND LAPIDARY, (2) EARTH SCIENCE AND FIELD BIOLOGY FOR GRADES 7-12 DEALING WITH CONCEPTS OF SOILS, WATER, PLANTS, MINERALS, AND WEATHER, (3) FIFTH- AND SIXTH-GRADE SUBJECTS SUCH AS MATHEMATICS, ART, LANGUAGE ARTS, SOCIAL STUDIES, MUSIC, HEALTH, SAFETY AND NUTRITION, PHYSICAL EDUCATION, AND SCIENCE, (4) LANGUAGE ARTS ACTIVITIES AIMED AT AWAKENING INTEREST IN THE PHYSICAL SETTING OF THE OUTDOOR CENTER, STORY TELLING, DRAMATICS, AND POETRY, (5) SOCIAL STUDIES BASED ON A HOMESTEAD AND THE RIVER, AND (6) CORRELATIONS OF ART AND SCIENCE. GENERAL RECREATIONAL ACTIVITIES AND GAMES ARE PRESENTED AND ACTIVITY PROGRAMS ARE PRESENTED FOR EACH OF THE FOUR SEASONS. (AL)

SCHOOL CITY OF GARY

The Public School System of

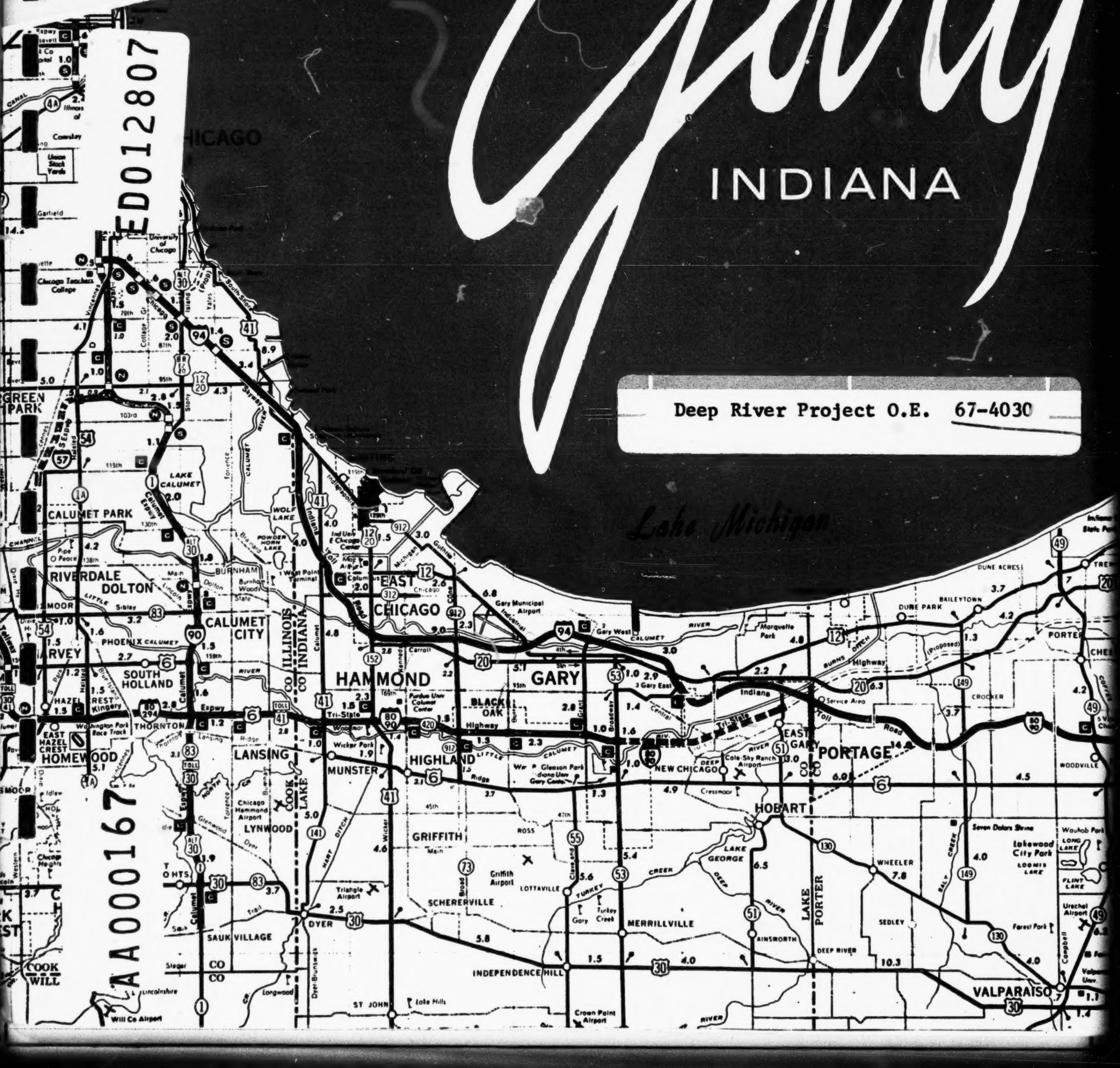
Gary

INDIANA

Deep River Project O.E. 67-4030

ED012807

AA000167


CHICAGO
University of Chicago
Chicago Teachers College
Lake Michigan
GREEN PARK
LAKE CALUMET
WOLF LAKE
CALUMET PARK
RIVERDALE
DOLTON
HARVEY
SOUTH HOLLAND
CALUMET CITY
ILLINOIS
INDIANA
EAST CHICAGO
HAMMOND
GARY
BLACK OAK
THORNTON
EAST HAZEL CREST
HOMEWOOD
LANSING
MUNSTER
HIGHLAND
NEW CHICAGO
EAST GARY
PORTAGE
DUNE ACRES
DUNE PARK
BAILEYTOWN
HOBART
LYNWOOD
GRIFFITH
SCHERERVILLE
DYER
SAUK VILLAGE
MERRILLVILLE
LAKE GEORGE
AINSWORTH
DEEP RIVER
WHEELER
SEDLEY
LAKE
PORTER
INDEPENDENCE HILL
ST JOHN
VALPARAISO
COOK
WILL

MAY 16 REC'D

Report

SCHOOL CITY OF GARY
Gary, Indiana

Deep River Outdoor
Education Program

"SPECIAL ACTIVITIES SUPPLEMENTAL TO AND RELATED TO THE ART PROGRAM AT DEEP RIVER OUTDOOR EDUCATION CENTER"

5/5/67

INTRODUCTION

Nature confronts us constantly with multiple components of art forms. In it we can see variety of line, color, value, and texture as well as many design principles such as simplification, repetition, symmetrical and asymmetrical balance, emphasis and unity. The teacher must help the child to see, to select, to analyze the design components found in nature. The teacher can encourage the child to draw directly from nature to develop the careful sensitive observation which is the basis for creative interpretation of the world around and about the student. This direct and forthright experience becomes the catalyst for promoting a sound understanding of scientific knowledge, as well as an aesthetic comprehension of nature's forms.

The list of suggested activities is only a sampling of the many rich and meaningful experiences that the students may undergo through well-planned field trips to Deep River. The art teacher will find that one trip will serve as a catalyst for many art experiences in the classroom.

Deep River offers art teachers of Gary, Indiana, an excellent opportunity to bring to their art students natural resource materials for planning meaningful art activities. In planning field trips to Deep River, the art teachers should plan work that will challenge the ability of the students. Emphasis should be placed upon the utilization of the natural surroundings of Deep River resource materials in the student's studies. This will include finishing art items on the site as well as collecting and sketching objects to be taken back to the classroom to be expanded further. The work should be planned to give students the opportunity to work in various media.

Objective: Design

1. To become aware of the elements of art structure and through their use discover the principles governing their use

Suggested Activities

1. Study line and form of objects in nature.
2. Study design in trees, plants, and other natural forms.
3. Practice exercises to stimulate creative thinking.
4. Study appearance of form as affected by light and shade.
5. Apply design fundamentals to recognizable and pure abstract forms.
6. Design and make a block print after making drawings of source materials such as plant and animal forms.
7. Make a tapestry using designs made on site (hooking, stitchery, etc.).

Objectives: Color

1. To increase sensitivity to color and experiment with color quality relationships
2. To develop ability to apply color knowledge to creative problems
3. To develop increased knowledge of color qualities of hue, value and intensity and their relativity in use
4. To increase color appreciation and discrimination in color choice in art content and everyday living
5. To observe value and intensity relationship in nature and color interpretation for specific expression and representation of mood

Suggested Activities

1. Use colored and pastel chalk, transparent water color, and acrylics to interpret landscapes.
2. Make decorative panels using nature study and research in creative form.
3. Make a collage using natural materials.
4. Make designs using various color schemes.
5. Make collage using torn and cut paper from magazines.
6. Make designs using transparent tissue paper.

Objectives: Landscape

1. To develop an appreciation and awareness of beauty in our surrounding
2. To develop keen observation
3. To study the various methods of landscape expression such as impressionism, post-impressionism, and cubism

Suggested Activities

1. Draw and paint landscape as the individual sees and feels it.
2. Draw and paint in the manner of the impressionism, post-impressionism and cubism.
3. Draw and paint in various media:
    - Water color
    - Conte
    - Chalk
    - Acrylic
    - Mix media
    - Pencil
    - Ink
    - Tempera
    - Oil pastels

Objectives: Paper Construction

1. To develop an awareness for modeling of form through inexpensive materials

2. To develop an awareness of different uses and application of paper-mache and paper construction in fine art, advertising art, and as an educational aid

Suggested Activities

1. Paper-mache objects such as animals, birds, plants, etc.

2. Activities involving paper construction and basic methods of scoring, folding, and shaping paper plants, birds and animals in three dimensional concrivancies

Objectives: Drawing

1. To increase ability to visualize

2. To create and express ideas

3. To become more aware of the world about them

4. To learn to observe line and form

5. To study three dimensional objects about us

Suggested Activities

1. One-point perspective

2. Two-point perspective

3. Applying three dimensional seeing principles to practical freehand drawing and pictorial composition

4. Contour drawing

5. Analytical drawing (study of structures)

6. Scientific illustration

Objectives: Enameling

1. To extend experiences into using metal enameling as an art concept

2. To study the use of enameling on precious metals in historic ornament

3. To further understand the possibilities of the craft in reference to copper and silver work

Suggested Activities

1. Experiment with material by practicing the following methods using forms found in nature: stencil, sgraffito, scrolling, cloisonne and majolica.

2. Make cuff links, pins, pendants, bowls, decorative panels and boxes.

Objective: Lapidary

1. To develop an appreciation and understanding of the process of stone polishing and selecting

Suggested Activities

1. Study the various kinds of stones found in nature.

2. Select and polish various stones found on site to make jewelry.

Objectives: Ceramics and Sculpture

1. To sensitize the student to various natural media in nature as potential sculptural material

2. To use native clay as sculptural and ceramic media in the making of bowls, vases, statues, bas-relief, mosaics and other extensions of this content area

3. To simulate and reconstruct the art products and artifacts of many cultures in this form (ceramics-sculpture) in a modern context and approach

Suggested Activities

1. Select natural clay--purify it; wedge it; create an object; and fire it.

2. Build simulated ancient rock kilns on location and fire pottery in the time-tested methods of the Indians and Africans.

3. Cut, glaze, and fire mosaic cubes to be applied to original designs.

4. Create terracotta sculpture using the cast method.

5. Apply the sculpture form to uniquely formed roots and wood shapes.

SCHOOL CITY OF GARY
Gary, Indiana

TENTATIVE CURRICULUM GUIDE

Deep River Outdoor Education Program

"EARTH SCIENCE AND FIELD BIOLOGY"

(Grades 7 - 12)

5/4/67

EARTH SCIENCE AND FIELD BIOLOGY

(Grades 7 - 12)

Philosophy

A knowledge of nature is necessary before man can control it. To live in a scientifically based civilization with some appreciation of the forces that are shaping the lives of modern citizens, the teaching of science at this level (7-12) must be geared to an understanding of what science really is. Our primary emphasis is then directed toward the investigative and inquiry approach. By applying this method of teaching and learning through field exploration, concept forming and seeking are desirable objectives to be sought in this excellent learning situation. Our present intent at best is to prepare a laboratory (field) centered program that lends itself to the fullest attainment of the stated objectives.

General Objectives for Outdoor Nature Study in Earth Science and Field Biology

1. To develop an awareness of and promote functional understanding of the interdependence of living things to their physical and biological environment.

2. To develop an awareness and an appreciation of the constant changes that are taking place in their environment.

3. To develop an appreciation for the natural resources and an awareness of the importance of conserving those natural resources.

4. To develop an aesthetic and spiritual appreciation for the unity and design in nature.

5. To promote better citizenship through responsible individual action.

6. To emphasize worthy home membership.

7. To promote greater and efficient use of leisure.

8. To provide the opportunity for students to share outdoor knowledge and experiences in science with classmates and other students.

9. To develop scientific concepts and understanding by applying knowledge of natural principles and laws to their outdoor setting.

10. To help students to think creatively.

11. To develop a sense of respect for all living things through the study of natural science.

12. To encourage good health habits.

EARTH SCIENCE

Basic Concepts - Soils

1. Soils consist of air, water, organic or inorganic materials.
2. Rocks are constantly being broken down by weathering.
3. Washing, blowing away of the soil by water or wind is erosion.
4. The soil profile is made of layers of topsoil, subsoil, and parent materials.
5. Man is dependent upon the soil for most of its food, shelter, and clothing.
6. Land is often damaged by the removal of cover--flood erosion, loss of plant nutrients and soil structures.
7. Soil erosion can be corrected by using land within its capabilities and applying conservation practices as needed.
8. Many forms of wildlife may suffer from unwise drainage of lakes and marshland.
9. Because soil is a basic resource, it should be used intelligently and conserved wisely.

Basic Concepts - Water

1. Precipitation is our only real source of water, but it must be stored underground or below sea level to be available for our daily needs.
2. Erosion may cause loss of much of our water supply through lake and stream pollution.
3. Water storage may be increased through good watershed management.
4. Precipitation, evaporation, run-off, and storage of water represent the important phases of the water cycle.
5. Life is impossible without water. It is needed to grow crops, livestock, and preserve human life.
6. Water is used increasingly in the home.
7. Use of water for navigation and recreation holds and important place in the community and the national economy.
8. Most of the rainfall lost through run-off can be prevented through good conservation practices.

9. Water to be useful to man must be free from harmful bacteria, objectionable minerals and silt.

10. Pollution is one of our most serious conservation problems.

Basic Concepts - Plants

1. Green plants are the factories in which usable forms of food are manufactured from raw materials through the sun's energy and made available to other forms of life.

2. Plants constitute the largest and most varied body of living things.

3. Trees and other kinds of plants are in constant competition for light, water, minerals, and favorable living conditions.

4. Plant communities are in a constant process of change.

5. Under natural conditions, plant communities develop slowly into climax communities. Man may greatly accelerate, alter, or retard this development.

6. Any plant which is growing where it is not wanted or needed is a weed.

7. As man learns new uses for plants, some emerge from the classification of weeds to the realm of usefulness.

8. Through control measures, man has improved some plants while he has eradicated others.

9. Plants in their community associations illustrate vividly the principle of interdependence in nature.

10. Wise management and use is essential for the improvement and sustained yield of plants.

11. The chief enemies of plants are fire, insects, disease and grazing animals, while plants are dependent on some of these factors for continued growth, production and dissemination.

12. State and Federal governments have joined private land owners in the management, control and use of forest and range areas.

Basic Concepts - Minerals

1. Our non-renewable minerals are being used quite rapidly.
2. Indiana has vast quantities of non-metallic minerals.
3. Due to constantly diminishing energy resources, man is constantly searching for new sources of energy.

Basic Concepts - Weather

1. Weather is condition of the atmosphere over a relatively short period of time.
2. Changes in the weather are due to changes in the condition of the atmosphere.
3. Conditions that may exist in the atmosphere and may change are temperature, relative humidity, wind speed and directions, barometric pressure, kind of cloud formation.
4. Winds are caused by unequal heating of the earth's surface.
5. Weather patterns are very complicated and accuracy is very difficult to predict.
6. Some weather changes can be predicted from clouds and wind direction.
7. The U. S. Weather Bureau collects information about conditions over much of the U. S. and uses this information to prepare maps.
8. Probable movement of weather patterns can be determined by studying maps.
9. Man's knowledge of the weather enables him to plan his activities better and save him thousands of dollars and human lives.

Suggested Activities In Earth Science

1. Collecting soils, rocks, fossils
2. Study rocks, soil, the effect of erosion
3. Keeping field notes of observations on a locale before and after rain
4. Night study of major constellations
5. Studying the moon through binoculars and telescopes
6. Scanning the night sky for meteorites, comets, etc.
7. Observing cloud formations

BASIC CONCEPTS IN FIELD BIOLOGY

1. General distribution of plant and animal communities is dependent upon the climate.
2. Local plant and animal communities are distributed and affected by local environmental differences.
3. Management and control of an area is facilitated by a knowledge of the changes taking place in the communities and the environmental factors of the area.
4. After learning to manage and control his environment, he must learn to conserve his natural resources.

Suggested Activities In Field Biology

1. To study the general relationships between climate and vegetation
2. Study local weather changes
3. Develop and use study plots and records .
4. Study temperature relationships of air, land, and sea
5. Make growth measurements
6. Study soil textures and composition
7. Study water holding composites of the soil
8. Mapping the area
9. Inventory of the area on a structural basis
10. Study plant sampling and their frequency
11. Determine type of ground cover
12. Study plant transpiration and photosynthesis
13. Phenology
14. Land successions
15. Study plant and animal distributions
16. Water analysis
17. Identification of flora and fauna of area
18. Classification of plants according to habitat

19. Plankton studies

20. Study the effects of seasons on flora and fauna

21. Bird studies

22. Soil profiles

23. Population studies of plants and animals

24. Study the balance of nature

25. Make pyramid studies

26. Study food chains

27. Cycle studies of organisms

28. Maintain a macro-micro organism nursery

29. Bird handling

30. Maintain a green house

31. Planting and cultivating trees, shrubs, etc.

32. Pond water successions

33. Air and stream pollution

34. Study the relationships between conservation and ecology

35. Collecting and pressing flowers, leaves, etc.

36. Collecting and mounting seeds, insects, etc.

37. Leaf study by means of blueprints, potato prints, spatter prints, crayon, clay

38. Study animal tracks, and making clay molds

39. Establishing shelters and feeding stations

40. Observing animals and keeping field notes on their habits

41. Finding animal homes and examining their construction

42. Taking nature hikes

43. Maintaining a terrarium and aquarium

44. Recognizing bird and animal sounds

45. Listening to and recording night sounds

wj
5/4/67

TENTATIVE CURRICULUM GUIDE

Deep River Outdoor
Education Program

5th and 6th Grade
SCHOOL CITY OF GARY

4/15/67

Foreword

The Deep River Outdoor Education Center experience for the boys and girls in the fifth and sixth grades will be a valuable part of our total eduational program. Through the activities listed in this booklet the children will learn to live together, learn together, and have fun together in the physical setting of this miniature community.

This guide has been written to supplement the subject matter areas and objectives of the classroom through direct experiences related to the outdoors. This guide is by no means complete, but meant to serve as an introductory plan. It consists of possible activities for children in the areas of Science, Mathematics, Language Arts, Social Studies, and Art and Crafts.

Much of this original work in preparing this guide was done by the following curriculum committee members:

Patricia Cline, Art Teacher - Vohr
Olga Dotlich, Physical Education Teacher - Bailly
Victor E. Fraser, Intermediate Teacher - Nobel
Leo Kominiak, Physical Education Teacher - Edison
Mary Sharp, Counselor - Lew Wallace
Richard Spradley, Intermediate Teacher - Brunswick
Dr. John Starr, Elementary Supervisor
Gerald Troxel, Physical Education Teacher - Nobel

Help and suggestions have come from the following reference materials:

A Camping We Will Go, Battle Creek Public Schools, Battle Creek, Michigan

Outdoor Education Handbook, Northern Illinois University, Department of Outdoor Teacher Education, Dekalb, Illinois

Resource Unit, Bradford Woods, Martinsville, Indiana

It is hoped that this guide will prove valuable for future curriculum planning.

1. Mathematics

Figuring finances for coming to Deep River Outdoor School
Operation of the Outdoor Education Trading Post
Estimating distances and time
Measuring areas of land
Planning cook-outs, amounts needed and cost of food
Measuring circumference of trees
Planning time schedules
Making scale drawings
Estimating location of stars
Finding wind velocity
Finding heights of trees
Various ages of items found
Estimating speed of the river
Geometric shapes in nature
Averaging barometer and temperature readings
Measuring percent of slope
Pacing distance in hiking
Compass hiking

2. Art

Sketching and drawing of various scenes
Using native materials (clay, grasses, weeds, berries) for pottery, floral arrangements, mats, picutres, etc.
Various colors and shades found in nature
Creating table centerpieces
Noticing design in nature
Photography
Plaster casts
Leaf printing
Maps and scale drawings
Cloud and tree shapes, formations
Sketches of leaves, flowers, trees, tracks, etc., for identification purposes
Indian Sand Painting

3. Language Arts

Writing letters to parents before, during, and after the week at the Outdoor Education School
Reading reference books
Planning the weekly program
Taking field notes
Keeping a Log Book of activities of the week
Keeping a new vocabulary list
Reporting on special experiences to the entire class
Listening to directions and identifying sounds
Evaluation sessions
Writing poems and creative stories
Story telling
Labeling and identifying specimens
Demonstrations
Relating experiences orally to other groups upon returning
Writing stories, plays and poems motivated by experience
Enjoying a good book in free time
Playing and leading games

4. Social Studies

Studying the history and geography of the Outdoor Education School area
What is the source of Deep River, where does it go, and in what direction does it flow?
What Indian tribes were located in this part of Indiana?
Skits on Indians and Pioneers of this area
Maps and models of the area
Craft projects from native materials
Map reading
Solving common problems of living together by planning cooperatively, accepting responsibility, and becoming open-minded when seeing all of each other's problems
Visiting local spots of historical interest
Putting on a pageant about Lake County
Participating in an Indian ceremonial
Making traps, snares, slings, boomerangs, etc.
Cook-outs
Visiting an abandoned farm
Participating in camp government
Cooperation in camp activities
Dramatizing conversations among Indians, pioneers
Budget for camp operation

5. Music

Night sounds
Bird calls
Musical instruments from nature
Writing new songs
Singing around the campfire

Creative dancing campfire
Square dancing
Music listening - for recreation
Group singing

6. Health, Safety, and Nutrition

Using safe practices in the out-of-doors
Planning equipment lists
Planning personal clothing lists
Preparing proper food for cook-outs and a balanced meal
Independent health habits
Dressing properly and adequately
Setting tables and serving as host and hostesses for meals
Making beds
Doing good housekeeping tasks

7. Physical Education

Hiking
Group games and square dancing

8. Science

Making clue charts for identification of trees, flowers, birds
Collecting and pressing leaves, and other plentiful plant specimens
Collecting and mounting seeds, insects
Felling a tree
Leaf study by means of blue prints, potato prints, spatter prints, crayon, clay
Studying animal tracks, making clay molds
Sketching
Using microscope and hand lens for close-up study of parts
Nature scavenger or treasure hunts
Building shelters and feeding stations
Observing animals and keeping field notes on habits
Collecting bird nests and noting their construction
Finding animal homes
Taking nature hikes
Building a terrarium or aquarium
Learning to recognize bird and animal sounds
Using plant, tree, and animal products to make: Cooking utensils, cordage, whistles, fishing plugs, tea, jewelry
Listening to night sounds
Making weather observations and predictions
Star gazing and observations
Erosion prevention and soil samples
Collecting rocks, soils, and fossils
Walking up gullies, studying rocks, soil, effects on erosion
Breaking up a rock and studying its properties under microscope
Keeping field notes of observations on a locale before and after rain
Taking a rain hike
Conducting soil experiments
Studying slope at different elevations

Using a handlevel to measure different elevations
Night study of major constellations
Looking at moon through binoculars or telescope
Recording phases of the moon
Looking for meteorites
Estimating time by shadow of sun or by star position
Making star trails with camera
Observing and sketching clouds
Building weather instruments
Conducting water and air experiments

Preparation:

1. In-Service training for teacher
    a. To familiarize teacher with area
2. Planning program with the children
    a. Stimulating interest within the classroom
        1. Teacher brings in something of interest from the site for children to observe. (A rock, snake, turtle, soil sample, etc.)
        2. Have question-answer period about the object
3. Oral discussions between teacher and students
    a. Having a map of the site
        1. Teacher showing pupils what they are going to visit
        2. Showing the general lay-out of the Education and Recreational site
        3. Things to look for at the site
        4. The trail the children will use to the site
4. Flag raising ceremony
    a. Designating three children to raising the flag
    b. Instructing children of what to do when they leave bus to circle flag pole
    c. What poem or song will be sung when flag is being raised
5. Ground rules and responsibility of each individual
    a. Formation of groups
    b. Staying with group
    c. Stay on the trail
    d. Take notes
    e. Ask questions
    f. Watch behavior
    g. No picking of wild materials or natural materials unless advised to do so
    h. Listen to instructions
    i. Use proper facilities
    j. Other
6. Making of name tags
    a. From natural material (wood)
7. Observation game on route to the site and back to school
    a. Example of one such game is an identification game (See Example)

8. Proper clothing children should wear

    a. Depending on the weather

9. Discussion of material needed at the site

    a. Pencils
    b. Paper or note book
    c. Identification keys
        1. tree
        2. bird
        3. flower
    d. Containers -- if collections are permitted
        1. leaves
        2. rocks
        3. grass
        4. water front specimens
        5. soil specimens
    e. Graph paper -- for map making
    f. Other

10. Discussion of follow-up
    a. See follow-up sheet

On Site: Arriving at the site

1. Observing bus safety

2. Flag raising ceremony - beginning of day

    a. Marching from bus to flag pole
    b. Making circle around flag pole, standing at ease
    c. The three children designated proceed to the flag pole
        1. One child carrying the proper folded flag with one boy on right side and another on the left side
        2. While one boy is raising the flag, the other two stand back at attention
    d. While flag is being raised, all shall come to an attention position and say the pledge to the flag
    e. Following pledge and raising of the flag, a poem can be read to the entire group by a child (Ex. "Your Flag and My Flag")
    f. After poem, pupils leave in a single file away from flag pole, observing silence

Language Arts

Aim: To awaken the interest of the children in the physical setting of the "miniature community" or Outdoor Education and Recreational Center in which the educational experiences are being held and to compare this "community" with their home and surrounding area, while creating and understanding of the relationship between man and his environment through the use of language arts.

Objectives:

1. To enrich vocabulary and concepts
2. To express oneself well in both written and spoken word
3. To write legibly and spell correctly
4. To read and interpret correctly
5. To learn how to question, how to detect misconceptions
6. To listen and be able to draw conclusions
7. To be able to express one self through creative dramatics
8. To be able to express one self through poetry
9. Other

Activities

Weather Study

A. Forecasting and recording

1. Keeping weather chart
2. Taking and recording readings
3. Making predictions
4. Using station symbols
5. Reading, making and using weather maps
6. Keeping weather records
7. Making weather reports (Oral and written)

Story Telling

(See story telling, poetry, and dramatization activities sheet)

Keep a Log

1. Making of log (See log instruction sheet)
2. Time of arrival and departure
3. Using native symbols of things seen on the trail
4. Activities listed on the log
5. Names of log of members of group

Central Area Bulletin Board

1. Instructions for groups
2. Rules and regulation of camp site
3. Group activities listed
4. Other

Safety on Site

1. Writing of safety rules
2. Dramatization of safety
3. Other

Building of Terrarium

1. Identifying and labeling plant life
2. Charts and grafts of growth

Note Taking

1. On trail
2. Lectures
3. Instruction

4. Listening activity

Letter Writing

1. Learning communication skills
2. Putting to use language arts skills, legibility, spelling, correct word usage, and correct form
3. Review own experiences
4. Summarization of their experiences

Rock Hikes

1. Collecting and identifying rocks
    a. color
    b. structure
    c. hardness
    d. fracture

Swamp Hike

1. Measuring and taking notes on DEPTH debt of swamp
2. Identifying and labeling swamp vegetation

Trailing

1. Making trail signs
2. Learning how to use signs and symbols
3. Showing and marking directions
4. Showing distances
5. Showing and labeling danger
6. Map making of trails

Scavenger Hunt

1. Use of compass readings
2. Picture writing (Use of Symbols)
3. Written communication
4. Development of symbols

Map Making

1. Kinds of map making
    a. road
    b. topographical

Sample Detailed Development of Language Arts Activities

1. Story Telling

Purpose of story telling: to give pleasure, to expand the imagination and widen the sympathies. It is an imaginative substitutes for experience and should be told so that it gives joy to both narrator and listener. It should not be confined to rules and regulations.

Aims:

1. To entertain
2. To guide reading
3. For language study
4. For intellectual discipline
5. For illustration
6. For culture
7. For character formation

Ten Do's for Story Telling:

1. Love the story before you tell it
2. Choose a story that is worth learning
3. Enrich your background
4. Leave nothing to chance (Many a good story has been spoiled by a halting, rambling, apologetic introduction, or by pointing out the moral of the story)
5. Do cultivate a pleasing delivery, direct, sincere and simple (Avoid mannerisms and all meaningless gestures)
6. Do observe your time limit
7. Do cultivate a healthful mental attitude toward your audience. They are with you and for you, meet it with a sincere desire to do your best
8. Do cultivate a good voice and diction, the story tellers greatest asset
9. Do sustain interest to the end, close your story with a sense of completeness. Audiences will forgive many shortcomings if your conclusion is forceful and conclusive
10. Leave the story with your Audience. Don't take it away!

The Marks of a Good Story:

a. A strong dramatic plot
b. Action
c. Incidents capable of being described in clear, out vivid language
d. A fast start- an interesting opening sentence that focuses attention immediately
e. A surprise climax

Types of Stories:

a. Ghost - The most asked for type, but one that must be handled with care. Never try to scare your campers. One ghastly story can spoil months of work, so use common sense.

b. Adventure - True, fictional, historical, nature, Indian, pioneer, etc.

c. Humouous - American tall tales, camp happenings, etc.

d. Hero - Inspirational, The Bible, legends, Indians, pioneers, explorers, etc.

e. Miscellaneous - Inspirational, moralistic, spiritual

Sources of stories: Library, radio and T.V. personal experiences, other story tellers, imagination, etc.

Showmanship

This is an art of attractive presentation. Without it the leader and the songs, stunts and stories would fall flat. Showmanship is the indispensable ingredient that puts sparkle and life into the campfire program.

Follow the fire: Lots of pep when the fire is high - Quiet as the fire dies.

a. Vary pace and timing of stunts

b. Trail to campfire should be attractive

c. Don't have large group campfires too often

Campfires are very important not only bacause they are the high point of many campers' experiences but, because of the marvelous opportunities they give for fellowship, inspiration and evaluation.

2. Creative Dramatics

Potentially, the most valuable of the arts in a camp program is drama, for not only may it integrate and focus all the other arts, but its basic material is the give and take of social living. Because the leader helps the campers to make use of their own latent resources, to give form and substance to their feelings and ideas, the dramatizations developed in camp can be beautifully rewarding and satisfying to the participants.

Imagination and resourcefulness are important qualifications of the leader, for he will need to respond to the happenings in camp in whatever activities he initiates. He needs to be alert in sensing and using the ideas of the campers also, for the more he encourages them, the more creative thinking they will do. Without stimulation from the leader, their creativity often remains on an infantile level.

Though dramatics, as a rule, is not a major activity in camp -- swimming, crafts, hikes, cook-outs, nature activities, etc., being naturally of highest importance as camp activities -- with a capable leader, dramatics can play a significant part in realizing the objectives sought by every camp; creative education, social growth, and recreation. Certainly, with all its other values to the boy or girl at camp, it has wonderful power in providing wholesome fun.

Objectives:

1. To make the child a valuable, contributing member of a group situation.
    a. willing, able to contribute as well as to listen
    b. respect other opinions
    c. awareness of the need for accurate communication
    d. awareness of the need for accurate observation in relating
    e. awareness of the group's welfare/rights of expression
    f. ability to accept and apply constructive criticism.

2. To make the child more keenly aware of his own feelings, the world around him, the feelings of others and the joy and beauty of the entirety of his experiences.
    a. sensitive observation/intelligent interpretation
    b. stimulation of imagination/guided back to reality of child's world
    c. teach to reach out for the unfamiliar

3. To provide each child with the supreme satisfactions of having created something which is his own and of which he can be proud.
    a. provide opportunity for expression
    b. *Note: This does not mean that their creation finds wide acceptance in all cases.

4. In carrying out the above objectives, stress must be laid upon speech, bodily control, poise and personality since these are the "tools" with which the child carries out the objectives mentioned already.
    a. provide tools indirectly in guidance
    b. mold and shape/help to find correct tool of expression

**NOTHING IS OF TRUE VALUE IN ITS ACHIEVEMENT UNLESS THE CHILDREN CAN HONESTLY FEEL THAT IT CAME FROM WITHIN THEM - GUIDED YES, BUT THE FINAL DECISION AND CREATION ARE THEIRS!

Making a plan for Guiding

1. The specific goal of each experience is to meet the strongest needs of the group through a specific form of satisfying dramatic expression.

2. Example: How to determine needs of the group at a first meeting
    a. Acquaintance -- names, respect and consideration
    b. Express themselves by doing -- release energy
    c. Break down social ---emotional barriers through dramatization in basic form of rhythmic movement
        (1) "wind", "trees", "animals", etc./related to new adventure
        (2) strive for simplicity
        (3) focus to one thought
        (4) use "do" action verb
    d. Creative Rhythmic Expression
        (1) Music has power
        (2) Dancing in its broadest sence is rhythmic movement
        (3) Uses -- to motivate or heighten a mood
            provide strong rhythmic pattern
            arouse feeling and thinking
            to tell a story
    e. Bring activity to local point and give definite meaning to the activity.
    f. Leader should evaluate each session in light of what he wished to accomplish through the dramatization.

Suggested Ideas for Dramatization

Walking through the woods
Riding horseback
Wading in the surf
Magic Glasses
Setting up a camp sight
Everybody search and see what he can find
Parade of forest animals
Favorite animals
A search for treasure/Gold Creek
Find a few of their favorite people or animals they might like to be and have them show how they act
A cook-out
Favorite songs--(acted out/danced)
Favorite stories
Stories you tell or read to them
A bear visits the camp
Catching a big fish
Indian stalks a buffalo or deer
Visit to a farm
Bradford Family
***Most important of all, capitalize on the direct related learning experiences of the children everyday!

Stories:

1. "The Legend of Little Elk"

Many moons ago, there was an Iroquois named Little Elk, who made bows and arrows for the great hunter. In return, they supplied him with food, shelter and warm clothing. For Little Elk's bows were strong and supple and his arrows straight and keen and, with them, the hunters shot many fleet deer.

Another Iroquois called Yellow Eyes, envious of Little Elk, said to himself, "I, too, will make bows and arrows and I will tell the great hunters that mine are better than Little Elks". So he carefully copied everything he had seen Little Elk do and, when his bows and arrows were finished, he traded them to the great hunters.

But the great hunters soon discovered that Yellow Eyes' bows were not strong and his arrows did not fly straight, so that they missed many deer. From that time on, Yellow Eyes could find no one who wanted his bows and arrows, but Little Elk was busier than ever before.

2. "The Story of the First Woodpecker"

In the days of long ago the Great Spirit came down from the sky and talked with men. Once as he went up and down the earth, he came to the wigwam of a woman. He went into the wigwam and sat down by the fire, but he looked like an old amn, and the woman did not know who he was.

"I have fasted for several days" said the Great Spirit to the woman. "Will you give me some food?" The woman made a very little cake and put it on the fire. "You can have this cake" she said, "If you will wait for it to bake." "I will wait," he said.

When the cake was baked, the woman stood and looked at it. She thought, "It is very large. I thought it was small. I will not give him so large a cake as that". So she put it away and made a small one. "If you will wait, I will give you this when it is baked" she said, and the Great Spirit said, "I will wait."

When that cake was baked, it was larger than the first one. "It is so large that I will keep it for a feast" she thought. So she said to her guest, "I will not give you this cake, but if you will wait, I will make you another one." "I will wait" said the Great Spirit again.

Then the woman made another cake. It was still samller than the others had been at first, but when she went to the fire for it, she found it the largest of all. She did not know that the Great Spirit's magic had made each cake larger, and she thought, "This is a marvel," but I will not give away the largest cake of all." So she said to her guest, "I have no food for you. Go to the forest and look there for your food. You can find it in the bark of the trees, if you will."

The Great Spirit was angry when he heard the words of the woman. He rose up where he sat and threw back his cloak. "A woman must be good and gentle," he said, "and you are cruel." You shall no longer be a woman and live in a wigwam. You shall go out into the forests and hunt for your food in the bark of the trees."

The Great Spirit stamped his foot on the earth, and the woman grew smaller and samller. Wings started from her body and feathers grew upon her. With a loud cry, she rose from the earth and flew away to the forest.

And to this day all woodpeckers live in a forest and hunt for their food in the bark of trees.

3. Other Stories

a. Peter, Paul and Esben-Ash-Lad

b. Why an Indian Woman is Called a Squaw

c. Paul Bunyan

d. The Willy Jackal

e. The Silent Wage

f. The Locust and the Coyote

g. How the Coyote Danced with the Blackbirds

h. Why the Ant is Almost cut in Two

i. Five Peas in a Pod

j. How the Monkey Got His Short Tail

k. The Man Who was Full of Fun

l. Lord Peter

m. One Day on Bettle Rock

n. The Frog and the Ox

o. The Camp on the Big Onion

3. Poetry

Poetry, as well as stories can be dramatized. This can be fun during your break with the campers. You can have fun letting the children dramatize their poems or have them do choral readings of poetry. This can be accomplished by groups or by boy - girl situations.

Here are a few poems you may want to try with your campers and also, a list of poems that we have on hand for your use.

Tenderfeet in Camp

Black bugs in the water
Red ants everywhere
Chiggers round our wasitline
Sandfleas in our hair.
But the dust of cities
At any cost we shun·
And cry amidst our itchings
"Isn't camping fun."

Be The Best of What Ever You Are

If you can't be a pine on top of the hill
  Be a scrub in the valley - but be
The best little scrub by the side of the hill
  Be a bush if you can't be a tree.

If you can't be a bush, be a bit of the grass
  And some highway happier make
If you can't be a Muskie, then just be a Bass
  But the liveliest Bass in the lake.

We can't all be captains, we've got to be crew
  There's something for all of us here
There's big work to do, and there's lesser to do
  And the task you must do is the near.

If you can't be a highway, then just be a trail
  If you can't be the sun, be a star
It isn't by size that you win or you fail
  Be the best of what ever you are.

Other Poems:

1. The Frog
2. The Heart of the Tree
3. Your Flag and My Flag
4. The Sky
5. It's Easy to Quit

4. Songs

1. Types of songs: Quiet, peppy, action, special occasion, novelty, inspirational

2. What the audience expects from the leader:
   - a. The name of the song
   - b. The pitch or key
     (Be sure the whole group has it - if too high or too low - stop and start over)
   - c. The tempo - beating time
     Start and stop together
     Leader visible to everyone
   - d. Information about the song
     The words, tune, be sure the whole group knows the song
     If they don't, teach them
   - e. Pep, enthusiasm
   - f. Leadership - control
     Plan songs carefully, use common sense in selection. Don't ask what songs the group wants to sing, be prepared beforehand. Beware of parodies and songs that might offend. Keep the songs simple.

Following is a list of songs which is being suggested for use in the year's day camp program. Page numbers refer to the revised June, 1963, ACA song book, "Let's All Sing." They are songs which we know and have learned or will be learning, and songs which will be included in campfire programs during the week. You will want to add new songs to the list.

	Page
A Jogging Along	11
Donkey Riding	11
Railroad Corral	13
Let Us Sing Together	20
Crocodile Song	24
In a Cottage in a Wood	26
Six Little Ducks	29
Upward Trail	31
My Hat	34
The Frogs	41
Make New Friends	44
Each Campfire Lights Anew	45
Whippoorwill	53
Rise Up, O Flame	59
Ol' Texas	63
Now the Day is Over	92

Graces

For Health and Strength	65
God has Created a New Day	72
Hark to the Chimes	72
Praise for Bread	95

English Hiking Song

Tramp, tramp, tramp, tramp
Tramp, tramp, tramp, tramp
I'm happy when I'm hiking
Pack upon my back
I'm happy when I'm hiking
Off the beaten track
Out in the open country
Tramping all the way
With a real good friend
To the journeys end
Ten, twenty, thirty, forty
Fifty miles a day.

Lets Go Hiking

Lets go hiking (are you sleeping)
Lets go hiking, lets go hiking
Down the trail, down the trail
Over hill and valley,
Over hill and valley,
Back to camp,
Back to camp.

5. Stunts

Stunts should be amusing, instructive, active, mystifying but never hurt anyone in any way. They should always be in good taste.

Give the old stunts a new twist. Dramatize funny things that have happened in camp. Use canned stunts sparingly and personalize them.

An open ceremony is a stunt. Make it good for it sets the tone for the whole campfire.

The closing ceremony or song should be quiet and inspirational.

Stunts are classified into:

action
contests
mixers
magic
educational

Sources for the stunts include skit and stunt literature, radio and T.V. programs and individual imagination.

Social Studies

Aim: To awaken the interest of the children in the physical setting of the "miniature community" or Outdoor Education and Recreational Center in in which the educational experiences are being held and to compare this "community" with their home and surrounding area, while creating an understanding of the relationship between man and his environment.

Objectives:

1. Social adjustment and Social Living (Interdependence as well as dependence, character training--loyalty, sympathy, cooperation, people who help us, camp life, and history)
2. Early settlement (How the district was settled, local history, local people)
3. Indian legends and folk tales (Learning about the Indians that settle in the area)
4. Communications and Transport (local history of communications and transport, relationships with other nearby districts, traveling to and from the Outdoor Educational and Recreational area, the site area's communication and transport)
5. Physical features, geography and conservation (local features, comparison with nearby districts, place in United States geographical set-up, effect on community conservation)
6. Establishment of local towns and industries (local establishment, observations and games on route followed on the way to the area)
7. Understanding the effect of natural resources upon the history of civilization
8. General
    a. Group projects will be in action throughout
    b. Social services/ people who help us
    c. Visits where possible (see suggested activities)
    d. Community relations/ early settlement, own group settlement, economic aspect on community life
    e. Neighborly activities/ sharing speculation and concepts

Suggested Activities Relating to Objectives

1. Discussing and solving group living problems

2. Visiting local spots of historical and conservation interests
   a. Pop Warner Homestead
   b. The dam site
   c. The man-made lake
   d. Other local sites of interest

3. Vistiing areas other than local spots of historical interests
   a. Abandoned farms
   b. Cemeteries
   c. Industrial communities
   d. Sand dunes
   e. Lake Michigan
   f. Mines
   g. Rivers
   h. Others

4. Participating in area government (Group responsibility, individual responsibility)

5. Cooperation in activities, care of grounds, and equipment

6. Singing and dancing/ participating in an Indian ceremonial

7. Playing and leading games of historical, geographical, economical interest

8. Dramatizations (conservations among Indians, pioneers, Warner family, creative movement--more suggestions in Language Arts section of listed activities)

9. Use of Audio Visual Aids and Displays in Central Area

10. Understanding the effect of natural resources upon the history of civilization

11. Understanding the effect of natural resources upon population distribution

12. Experiencing leadership

13. Construction of primitive structures and household articles

14. Doing handicrafts out of natural materials

15. Observation and Nature Games for the Bus trips

16. Experiencing success and failure

17. Land-use problems and reasons for shifting population; charts and maps

18. Improvement of the camp community, such as landscaping

19. Recreation patterns as determined by the land and people

20. Sharing responsibilities

Sample Activities Developed in Detail

1. What can be learned from the Warner homestead

After the children have rested, the discussion about the homestead should begin. Children should have all material ready, such as pencil, paper, clip board of some type and their good listening habits.

The discussion of the homestead can center around the following guide:

1. Why did the Warners decide to settle at this site?
   a. What did they consider when they decided where to put the house?
   b. Why didn't they settle further west or east?
   c. Is there any reason they chose to be near the river?

2. What was the economic potential here?
   a. What do you think the Warners thought they would make their living from when they settled here?
   b. How do you suppose they found that their land could bring them wealth?
   c. Was this land possible to farm?

3. How did the way the Warners built their house meet the needs of their way of life?
   a. Was the house built all at once?
   b. What materials would be used to build a house like this?
   c. How did they preserve their food?
   d. Where did the Warners get the different material to build the north side of their house?
   e. What was a typical day like?
      1. What kept them busy?
      2. What did they do in their spare time?

4. Notice the river to the north of the house.
   a. What uses was the river to the Warners?
   b. What type of recreation was held at the river?
   c. Could the river be used for any type of transportation?

5. Other guide questions and information about the homestead will be available when a study of the site is made.

Things to do at the homestead:

As soon as a group arrives at the homestead, it is wise to have them sit down, take a dring of water, and rest before doing any other activity. This rest will provide time for some oral discussions between the leaders and students. An example of the kind of discussion possible is presented below:

1. What was learned on the trail
2. What things to look for on the trip back
3. Taking inventory of the surrounding area
4. Dramatizing a story relating to the homestead

Mathematics

Measuring

1. Using personal standards of measure

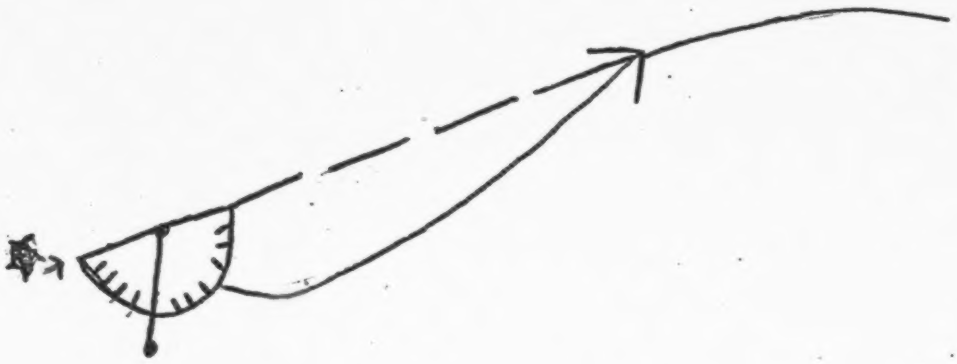
   With a tape measure, discover some portion of your body that can be used to measure one inch, one foot, one yard, your height, etc. Also, it is handy to know the length of your pace, your hand span, length of your foot, and the like. These are always available for approximating distances.

2. Origin of measures.

   The origins of measures can easily arise from work with personal standards of measures. Measures of lengths were derived from body measurements (the ell, girth, foot, fathom, rod, etc.) Measures of area arose from time spent in working the soil, the furlong, the acre, etc.) Units of weight and volume began with barter and trading (the stone, carat, ounce, bushel, etc.) A study of the origins of measures can give insight into reasons for standardized measurements and usefulness of approximate measures.

3. Slope of a hill by the clinometer.

   The clinometer is a semicircle of wood or cardboard which has a weighted plumb line hanging from the center and degree markings around the circumference. The slope of a hill can be measured by sighting to the top of a hill and then reading off the degree markings beside the plumb line. The knowledge of slope can be applied to contour farming, laying roads, erosion, and other related fields.



4. Measuring board feet.

   A board foot of lumber is a piece one foot by one foot by one inch. By using a Biltmore Stick, the volume of useable lumber can be determined. This concept can be extended to the current price per board foot of each species of lumber in a locality, and for the cost of the lumber in a single tree.

   By figuring up the cost of one tree for each child in the class, the children can gain a better understanding of the value of lumber.

5. Tree ring counts.
   A cross section of the trunk of a tree can be used in many ways. The age of the tree can be estimated quite closely, and the precipitation history can be traced by the rings on the tree. The child can locate when he was born according to the tree rings, and when other events happened in the life of the tree.

6. Circumference and diameter of trees
   These measurements may be made through body measurements with the Biltmore Stick, a tape measure, tree bors, etc.

7. Scale models
   Working with ratios of measurements are involved in making any type of a scale model. Examples of activities might be a pioneer settlement, a conservation project, an Indian Village, and the like.

8. Laws of leverage
   Mathematics can be employed in calculating various weights and distances needed in first, second, and third class levers that can be found in an outdoor setting (prying up a rock, moving a log, sweeping out the cabin).

Averaging

1. Temperature readings

2. Barometer readings

3. Pacing distances of several people

These examples and others may be used in averaging. Several readings may be made and then averaged together. Each child can pace off the distance to a certain object and then the class average calculated to find the average distance. Here the idea of individual scores adding to make a more average score can be discussed.

Estimating

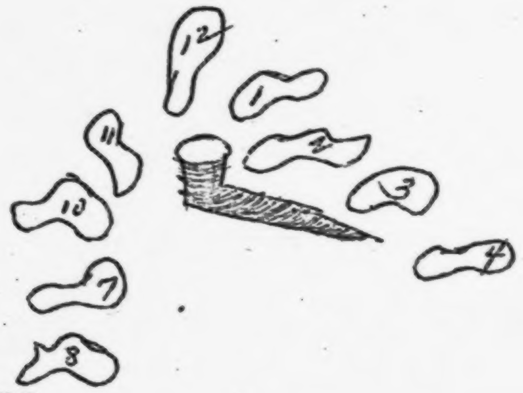
1. Pacing distances

One pace is equal to two walking steps. To figure the length of your pace, mark off a hundred foot distance. Then pace it two or three times to calculate how many paces you take in one hundred feet. Divide the number of paces into one hundred to find the length of one pace. The average adult man has a pace of five feet. Pacing can be used in compass work, figuring the slope of a hill, making a rough contour map of an area, etc.

2. Time of day

A rough estimate of the time of day can be determined by the position of the sun in the sky. When it is highest overhead, it is noon time.

A sun dial can be constructed to tell the time of day also. Place a stick in the ground, and mark the end of the shadow each hour, using a clock to establish the sun dial. From then on, you can tell the time on a sunny day by the position of the end of the shadow. (If the shadow stick is placed at an angle equal to your latitude, the hour markers will fall in a circle.)



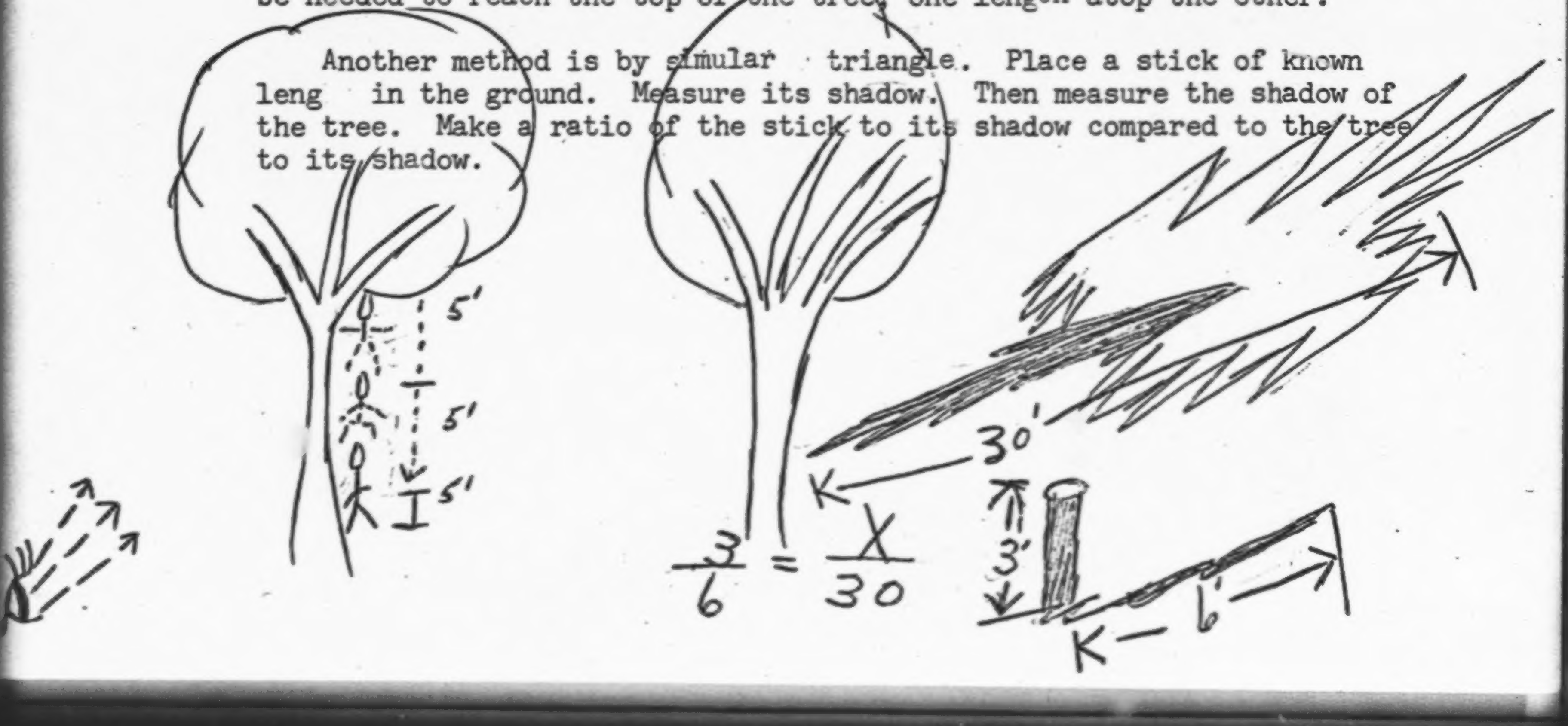
3. Distance of lightning

Sound travels 1,100 feet per second and light travels at 186,000 miles per second. If you begin to count the time span by "one thousand and one, one thousand and two.." as soon as you see a flash of lightning until you hear the thunder, you can calculate the distance the lightning is from you. Just multiply the number of seconds with the speed of sound. With this same method, you can calculate if a storm is moving toward you or away from you, and at what speed.

4. Inaccessible distances

a) Height of a tree or pole
Have one child of a known height stand near the base of the tree. As you stand about 50 feet from the tree, hold up a stick or pencil against the sight of the child. Estimate how many heights of the child would be needed to reach the top of the tree, one length atop the other.

Another method is by simular triangles. Place a stick of known length in the ground. Measure its shadow. Then measure the shadow of the tree. Make a ratio of the stick to its shadow compared to the tree to its shadow.



b) Width of river or valley

Sight an object such as a tree directly across the river. Place a stake at the point from which you sight. Pace off 100 feet parallel to the river, and mark that with another stake. Pace off 50 feet more parallel to the river and place a third stake. Then walk away from the river at right angles to the first pacing until you can sight through your 100 foot stake to the tree across the river. The distance that you paced away from the river is half the width of the river.

c) Height of cliff by measuring time of a falling object

You will need a stop watch and a heavy object, such as a rock to hit the bottom after it has left your hand. Add together 16 feet for the first second, 32 feet for the second second, and 64 feet for each second thereafter to calculate the height of the cliff.

5. Depth and surface of a lake

To figure the surface of a lake, try to see what geometrical shape it is closest to, and use the formula for area from that, (e.g. rectangular = length times width, circular = $2\pi r^2m$ etc).

To figure the depth of a lake, you can make depth tests with a long rope that has a weight on one end. Calibrate the rope in feet. Make several depth tests in an area, and you can make a contour map of the bottom of the lake, or a profile of its surface.

6. Using crickets as "Thermometers"

If the temperature is between 50 and 100 degrees, this rough estimate of the temperature may be used. Count the number of chirps you hear in 15 seconds time. Add 40 to that number. The answer is the present temperature.

7. Travel rate of insects

It is interesting to compare insects to humans. Time an insect to see how long it takes him to cover a certain distance, say 10 of his own body lengths. By ratios, figure out how fast you as a human would have to travel to cover ten of your body lengths in the relative speed of that insect.

8. Strength of insects

A study of ants can show that they have great strength for their body size. Measure the weight of a load of an ant to his body weight on a fine scale. Then figure how much you would have to carry relative of your body weight to equal the strength of that ant.

9. Velocity of river flow

You will need a stop watch and some object that will float easily for this experiment. Mark off a certain distance down the river, perhaps one mile or 100 feet. Time how long it takes your floating object to float that distance. Use the formula - Velocity = $\frac{\text{distance}}{\text{time}}$ to figure your velocity. Example: It takes your object 20 minutes to float a mile down the river. 20 min. = 1/3 hr. Velocity = $\frac{\text{one mile}}{\text{1/3 hr.}}$ Velocity = 1/3 mi./hr.

Mathematical Concept Developments

Concept: Finances of trip to Deep River

Preparation

1. Each pupil will prepare a budget book of expenses.
2. Cost of the bus per class
3. Cost of the bus per pupil
4. Cost of the bus for six group
5. Miles per gallon the bus gets on trip
6. Cost of gasoline for the two way trip
7. List of articles and cost of same at the trading post

On Site

1. Each pupil will look at budget book and determine how much he is to spend.

Follow Up

1. Each pupil checks budget.
2. Figure gasoline used.
3. Class total for articles bought at store.

Concept: Operation of Trading Post

Preparation

1. Each teacher must have price list of all articles available for sale.
2. Cost of utilities at Post must be figured.
3. Each pupil must determine what he wants to purchase and budget accordingly.

On Site

1. Go to the Post and let each pupil pruchase necessary items.
2. Pupils may decide upon cheaper or more expensive item.

Follow Up

1. How many stayed inside of budget?
2. Problems can be made up as to so many articles at such a price.

3. Cook-Out

Preparation

1. Class decides what it wants to eat.
2. Committee will go to store and determine cost of articles.
3. Entire class will figure cost of total articles per pupil.
4. Must remember charcoal, plates, utensils and other consumable goods.
5. How much of each article each pupil will eat? Ex.: one hot dog per person.

On Site

1. Distribution of the food as planned.
2. Does each pupil eat as much or more than was planned?

Follow Up

1. How close was the amount of food bought used up?
2. Disburtion or collection of more money.
3. What to do with left-over articles?

4. Planning time schedules

Preparation

1. Each pupil will have a list of what there is to see and do at the camp. This list should have the time for each activity. Have the pupils plan a route using their map and time schedules for seeing the camp.
2. In their notebook each pupil will record what time they arrived and and departed at each activity.
3. The pupils will know when the bus will arrive at the school. They will figure the speedy miles there and possible delays to determine the time of arrival.

Follow Up

1. Review notebooks to determine how close the schedule was followed.

5. Scale drawings

Preparation

1. Review or cover section in text that relates to scale drawings .
2. Pre-determine what scale will be used for figuring areas at Deep River.

On Site

1. Using string measure off areas and record data in notebook.
2. Find an insect and measure it.
3. Measure a rock.

Follow Up

1. Take measurements from notebook and figure areas using your own scale.
2. Take measurements of rock and insect and enlarge it 5 times, 10 times, etc.

6. Location of Stars

Preparation

1. Review in class the chapter on stars in text.
2. Have pupils learn location of these stars so they can easily find them.
3. Have pupils discover the different shapes of the constellations.
4. Read myths and other stories about constellations.

On Site

1. This trip must occur in the early morning (4 a.m.).
2. Use binoculars and telescope to point out the stars and constellations.
3. Make a contest up as to who can find the most constellations.
4. Record in notebook all stars identified.

Follow Up

1. Go over all stars and constellations identified.
2. Determine why some of the stars, planets, etc, were not visable.

7. Geometric Shapes in Nature

Preparation

1. Review in class the basic shapes.
2. Ask pupils what shapes they expect to see.

On Site

1. Find a leaf and examine for a variety of shapes. Place under microscope and further examine.
2. Determine what shapes the land is divided by natural and man-made boundries.
3. In the winter, examine snowflakes for shapes.
4. Shapes in the sky by cloud formations

Follow Up

1. List on board all shapes discovered.
2. Explain how some shapes were formed in nature.

Miscellaneous

1. compass work
2. cost and amounts of food
3. finances of a camp
4. operating a bank and store
5. bird houses
6. aerial photographic interpretation
7. weather math
    a. wind velocity
    b. precipitation
    c. relative humidity

References:

Freeberg, William and Taylor, Loren, Programs in Outdoor Education, Burgess, 1963. p. 453

Hammerman, D.R., and W.M., Teaching in the Outdoors, Burgess, 1964, p. 118

Hug, John, and Wilson, Phyllis, Curriculum Enrichment Outdoors, Harper and Row, 1965, p. 214

Smith, Carlson, Donaldson, and Masters, Outdoor Education, Prentice-Hall, 1964, p. 322

Wheat, Harry Grove, How to Teach Arithmetic, Row, Peterson, and Co., 1951, p. 438

Art Program

1. Philosophy

In this era of urbanization children must have opportunity to be cognizant of all the wonders of nature in all the direct, pragmatic ways. The Deep River Project will offer a laboratory where theories and observations via visual and audio aids in the classroom can be proven and confirmed. The educative processes will emphasize a sensitzing of the child's powers of concentration, observation, and creation.

Through the avenues of lookimg, emoting, touching, knowing and doing, he can reinforce and integrate art forms and elements with other content areas.

The ultimate goal of outdoor education in our society is the humanization of an adult towards others. This altruistic belief is supported by the contention that man can not survive by technology alone. Rather, it is supposed that man must cultivate avenues by which he can comprehend the needs and aspirations of his fellow men.

II. The Construct

The ART are program for the Deep River Project is envisioned as being composed of three basic areas:

A. Aesthetic Enrichment
B. Fine and Applied Arts
C. Integration

The following is an analytical description of each area:

Aesthetic Enrichment

1. Sensitizing the child:
The obvious need to introduce the child to nature and the basic elements supported by his natural curiosity and awareness of things about him. Through observation and discovery he can become cognizant of the fine organization of the elements--all things have a design and natural function. This phase of the program should be a laboratory observation of content introduced in the classroom. The elementary school prpgram would consist of four parts:

   a. Authoritatively selected art prints. The school would display the selected choices of authoritative groups by a grade level chronology of art history periods. They could be displayed on bulletin boards in the school hallways and classrooms.

   b. Photographs, pictures, and magazines illustrations of the principles of design: line, shape, form, texture, color, and the subordinates: pattern, light and shade, space, direction, intensity and balance should be displayed on the previously mentioned bulletin boards.

c. Inter-School Exhibits

Inter-school axhibits would encourage evaluation and cooperation. Children could view the works of other children in other schools encouraging an exchange of ideas.

d. International Exhibits

The UNESCO exhibits from the United Nations Bldg., and the Jr. Red Cross offer exhibits of children from foreign lands. Also, the classroom teacher can reciprocate with teachers in foreign countries through mutual exchange.

Fine and Applied Arts

1. An Important Content Area

The principles of the arts and the subsequent study of basic elements should be observed, studied, and projected as a content discipline. Psycho-motor skills which are attained through the art processes are also those which are required in other content areas. There is a great degree of relevancy between the processes of art in the classroom and successful experiences in art in an outdoor educational setting. Though they are supported by nature, the former processes are usually stimulated by stuio-visual content wheras the latter processes are conducted in an instrinsic setting of flora, fauna, and other natural elements.

A. The Developmental Program

1. The Construct:
All areas of art content would be studied through Senses: looking, feeling, touching, knowing, doing.

2. Principles for Consideration
line, shape, form, texture, color and space, pattern, shade, direction, intensity and balance.

3. Identification of the principles of art in:
   - a. the woods
   - b. the city
   - c. the sea
   - d. the jungle
   - e. animals
   - f. insects

B. Content

1. Organization

a. The principles of art would be programmed in the following methods:

(1) Drawing
(2) Painting
(3) Graphics
(4) Tactile
(5) Weaving
(6) Applied Arts
(7) Modulations

Drawing

Contour
Chalk
Pencil
Charcoal
Crayon
Oil crayon

Painting

Water Color
Tempera
Enemels

Graphics

Stick printing
Vegetable printing
Simple screen printing
Innertube printing
Cardboard
Linoleum printing
Wood block printing
Silk screening

Tactile

Modeling
Clay
Ceramics
Sculpture
3-D construction
    wood
    metal

Weaving

Paper
Yarn
Loom (simple)
Cardboard
Broom stick
Hand-direct
Shuttle (loom)
Loop
Stitchery

Applied Arts

Metal tooling
Glass masaics
Carving
Etching
Gifts
Ash trays
Chests
Boxes

Modulators

Spatials
Sculptures
Mobiles
Stabiles

C. Methods

At this time we are considering predominately fourth, fifth, and sixth grade children.

1. Suggested procedures:
    a. Pre-scheduled study of content
    The classroom teacher would prepare children for the excursion to the outdoor setting by giving attention to:
        (1) specific content goals
        (2) questions to be answered
        (3) ways to observe
        (4) projects to be completed on location

    b. Teacher load evaluation
    The children involved would be accompanied by their respective classroom teachers, besides the special area teachers of art, physical education and music. The student-teacher ratio would be approximately fifteen to one.

    c. Current Interest Factor
    The teacher and the children may decide to study and observe content which has not been inserted in the schedule book.

d. Evaluation

Children may display artifacts or projects completed in the outdoor setting or culminated in the classroom as visual testing. The teacher may assign murrals to to be painted, dramatic efforts, musical shows or an integrative approach involving all three areas. Children could write stories, poems, and creative plays. Exhibits of the childrens' art work could be displayed for parents and other groups.

Integration

1. Art in Support of the Learning Processes

Art processes would enhance learning in the Disciplines: Science, Language Arts, Foreign Languages and others. The special teacher would cooperate with the classroom teacher in defining goals, learning experiences and evaluation. Basically, the teacher could cut across many subject lines in achieving efficiency in learning. All facilities of a visual and auditory nature should be used expertly to reinforce natural stimuli.

Activity

Snow Sculpture

Sculptural concepts - 360° viewpoints
Snow

Preparation

Clay Sculpture, fugures, still life, etc. Discussions, and being exposed to the masters work: become familiar with the sculptural concepts.

On site

Sculpture in the snow, using any amount of snow necessary. No limits on size, subjects, or supply! Take pictures.

Follow Up

Evaluate pictures. Compare to each other, critisize, compare to the masters work.

Comments

This is an excellent activity for a snowy day and brings out the realization from the students of the variety of media possesing sculptural qualities.

Activity

Crayon Rubbings

To make the child aware of various textures.

Preparation

Texture

On Site

The student will search for various objects - leaves etc. The student will place a sheet of lightweight paper over the textured surface of the objects that he has found and rub with a wax crayon. The pattern will show through. The child will combine color and textures with care creating an umaginative design.

Follow Up

The child may cut shapes from fairly heavy paper and then arrange these in an overlapping design. The teacher will encourage students to use various textured paper such as sand paper, etc.

Comments

Materials

paper
wax crayon

Activity

Spatter painting

To create a design using natural shapes - leaves etc.

Preparation

Art vocabulary
Silhouettes
Positive shape
Overlapping Shapes
Transparancy

On Site

The student will collect and arrange found objects on a piece of heavy paper. The student will spray around these objects with very thin poster paint forming a silhouette. The student will try to create overlappping shapes and transparencies by rearranging the objects and chinging the color of spray.

Follow Up

The student may create designs from paper using negative and positive shapes.

Comments

Materials
Spatter gun
very thin poster paint
heavy paper

Activity

Jewelry from found objects

To teach craftsmanship

On Site

Students will search for small stones and small pieces of weather wood. Students will make attractive rings, pins, cuff links, and other attractive pieces of jewelry from found objects.

Comments

Materials
Jewelry making equipment
Attractive stones gathered from the beach
Pieces of wood gathered from the beach

Activity

Sand painting

To create a painting from natural materials as the American Indians did it.

Preparation

Study of American Indians and their sand paintings.

On Site

The student will gather sand and place it in a large jar. Students will take poster paint and dye the sand. Students will spread sand on a large piece of newspaper to dry. While the sand is drying the students will make sketches on a heavy piece of cardboard. When the sand is dry the students will apply the sand to their sketch in this manner: The student will cover a small area of the sketch with elmers glue and then sprinkle sand on top of the glue. When the the painting is finished and the glue is dry, the student will remove the excess and sand from the painting.

Comments

Materials
Elmers glue
Poster paint
Newspaper
Large jars
Snad
Heavy cardboard

Activity

Collage printing

To create a pleasing arrangement of natural materials.
To study the various textures of leaves, etc.
To introduce relief printing

On Site

The student will mount various leaves and other plant forms on cardboard in a pleasing arrangement with Elmers Glue. When the glue has dried the student will ink the cardboard and print the objects. The student may make as many prints as he desires.

Follow Up

Make other printing plates using various objects such as cloth, cardboard, and paper, etc.

Comments

Materials
Printing ink
Rollers
Inking plate
Printing press or spoon
Paper

Activity

Preserving objects in plastic

Preparation

Practice using acrylics and catalysts.

On Site

Students will look for small objects, leaves, butterflies, insects, etc. Students will preserve these objects in liquid plastic (castelite) for future study in the classroom

Follow Up

Study of objects preserved. Sketches from the preserved objects; file and keep on the objects

Comments

Materials

Liquid plastic
Small boxes etc. to pour plastic in

Correlation of Science and Art

Weather

1. Watch for changes in cloud formations. Study clouds, make cloud formations from carbon and make a classroom charts. Identify the clouds. Make observations of cloud layers and height. Use chart to identify clouds everyday.

2. Identify wind direction and speed. Draw a winter, summer, fall, and spring scene showing the direction of the wind.

3. Make observations in temperature differences in the sun, shade, wind, calm. Sketch a sunny, shady, windy, and calm day.

4. Discuss the effect of weather on living things. Find evidences where the the weather has affected living things. Draw ______________ on a rainy day.

5. Use portable wind guage during the day to plot and record wind velocity.

Trees and Leaves

1. Identify trees according to their bark, leaves, branching, fruit. On huge brown paper, draw 5 or 6 ft. tall trees - " real trees" and cut them out and label; observe these trees. Compare to real trees. Display in classroom.

2. Make a scientific collection of leaves.

3. Observe the oddities in tree growth. Twist, nodules, etc. Find one and sketch it.

4. Compare the kind of trees growing in the forest-fringe area and along the river. Draw 2 sketches; 1 from each area. Do not label. I should be be able to tell the difference.

5. Observe the root structure of trees in Deep River.

6. Discuss the uses of trees and their value to man and animals. Draw a landscape without any trees or bushes.

Rocks and Fossils

1. Classify rocks according to how formed, water- fire changed

2. Make a collection of rocks as to color, composition, weight, texture.
   a) Study these w/relationship to art.
   b) Find a colorful stone or pebble.
   c) Analize it (from 1).
   d) Weave a small color study out of yarn duplicating points in # 1.

3. Collect rocks according to hardness, layering, crumbly.

4. Observe the effect of weather on rocks, rain, ice, sun.

5. Visit the rock quarry and observe the rock strats. Discuss how it was formed.

6. Turn rocks over to see "what lives under rocks". Replace the rock.

Birds

1. Identify birds as to surrounding, size, song, shading.
   a) Draw from Encylopedia.
   b) Draw from nature
   c) Draw from memory

2. Make a list of birds sighted. What bird was seen the most number of times.
   a) Draw birds you see around here most (school)
   b) Draw birds you see around the camp.

3. Try to find food that birds might eat. Discuss if all birds eat the same kind of food.
   a) Look up and draw - Tell me in pictures.
   b) Show in outdoor scene which foods birds prefer.
   c) Run test out by window - placing different foods
   d) Identify which birds like which foods.

4. Try to identify a bird according to the song.
   a) Listen to birds while drawing.
   b) Draw a detailed observation of the birds.

5. Observe the coloring of birds and how they are camouflaged.

Water Life

1. Discuss the importance of the river and how it has changed with the passing of time.
   a) Background: draw bodies of water or shore views from imagination.
   b) Draw from sight - include perspective.
   c) Draw from memory.

2. Discuss the direction in which the water flows. Can you show this in a drawing?

3. Watch for tadpoles, insects, fish, animals. Include these in all drawings.

4. Look for evidences of animals along the shore.
   a) Draw from imagination.
   b) Draw from reality.
   c) Draw from recall.

5. Discuss the effect of water on soil. Floods and their effect.
   a) Draw the aftermath of a flood.

6. Discuss the importance of conservation of water.
   a) Draw the world or a city without water.

Animals

1. Look for animal homes.
    - a) Find out where they live.
    - b) Draw from your findings - sketch
    - c) Did the research work prove true?

2. Look for animal tracks along the river and paths. Be able to identify from sketch tracks you found.

3. Look for food that a rabbit, deer, or racoon might eat.
    - a) Look up.
    - b) Sketch proper animal by its favorite food.

4. Look for animals gathering food.

5. Examine rabbit pellets. What do rabbits eat.

6. Make a plaster of paris cast of animal prints.
    - a) Do sand sculptures
    - b) Do plaster casts
    - c) Do problem 6
    - d) Try to duplicate print!

7. Observe the way animals move. Hop, waddle, slither.
    - a) Sketch animals in the various stages of their movements.
    - b) Discuss action shots.

8. Observe the way animals eat.

9. Follow animal tracks along the river bank and paths.

10. Try to locate the place that a deer may have bedded down.

11. Observe animal tracks as to hoofed, clawed, webbed.
    - a) How many can you look up and sketch?
    - b) Sketch those you find.
    - c) Look up ones you could not identify.

12. Observe how animals protect themselves. Coloring, shapes.

13. Observe how some animals have more than one door to their home.

14. Measure the distance between steps.

15. Try to identify animals by their tracks.

Soil Conservation

1. Observe and feel various textures of soil. Sand, loam, and clay.
    - a) Discuss Indian sand painting. Try it.
    - b) Sand paint w/soil, sand, etc. that you can find and don't glue.
    - c) Bring some soil back and use on cardboard. Glue down. Do a color study from it.

2. Observe the effects of floods on soil. What can man do to keep soil from washing away?

3. Discuss the importance of water to soil.

4. Observe how nature prevents soil erosion. Roots, leaves, branches.

5. Observe how man prevents soil erosion. Check dams, plants.

6. Examine examples of erosion and discuss how it happened and how it can be controlled.

7. Examine and discuss what makes the earth crack and cake on top.
    a) From imagination, sketch a drought and after the flood.
    b) From nature, try to find a dry and wet area.
    c) Draw it in detail.

8. Make samples of soil needed for woodland trees and compare it to soil needed for prairie flowers.

9. Make some soil tests and compare the different areas as to what plants are within the area.
    a) Do several studies involving mixing paint.
    b) Note the subtle changes in color of soil.
    c) Match soil to mixed paints.
    d) Make a painting using only colors found.

Plant Life

1. Collect different kinds of seeds and observe how they travel.
    a) Sketch from nature
    b) Discuss, sketch from drawings
    c) What differences did you notice?

Gliders - maple, pine seeds
hitch hikers - pitchfork, burdock
sailors - sedges
parachutes - dandelions
explosives - Clamatics, peas

2. Observe and compare the structure of various flowers.

3. Identify a few of the common flowers.
    a) Draw common flowers from memory
    b) Draw common flowers from nature and study it. Detailed sketch. Compare Try this at school with a dandelion so the children understand how .

4. Discuss the flowers and note the buds that are not out as yet.
    a) Study stillife of buds.
    b) Sketch a stillife of flowers in their different stages of development.

5. Smell the various kinds of flowers. (Watch out for bees.)

6. Feel the texture of the leaves and stems of the various plants.
    a) Discuss texture of the various plants.
    b) Draw what the feel of the plants remind you of.

7. Discuss how plants have protected weapons.

8. Observe how some plants live in the shade, sun, and along the river.

9. Sketch the blossoms and leaves of the various plants.
    a) Study collages of the various plants.
    b) Collect twigs, leaves, etc. of various plants and construct a nature collage.

10. Observe and compare the size and shape variances in the same species of plant.
    a) Form an object on paper by the placement of leaves (different sizes).

11. Observe evidences of plant photosynthesis.
    a) Have them "draw" photosynthesis before they have any idea of what it is!
    b) Discuss what it is.
    c) Draw it again!
    d) Compare drawings!

Humorus Project

Insects

1. Observe the activity of an ant hill.
    a) Discuss ant hills.
    b) Draw an ant hill (cartoon style) at a busy time - noon? While observing ants at work.

2. Look to see what lives under a rock, log, on bushes.

3. Feel the insects. Do they have a hard or soft covering?
    a) Study insects - Draw imaginary ones
    b) Draw real insects
    c) Compare

4. See how some insects blend into their surroundings.
    a) Study these.
    b) See if you can find any.
    c) Hide an insect in your sketch.

5. Observe how insects are helpful. Harmful.

6. Observe the activity of a tent caterpillar.
    a) Draw one before you know what it looks like -- gets furry results plus arousing curiosity.

7. Note the life cycle of some of the insects.

8. Observe how some insects move. Discuss why this is important to their way of life.

9. Try to identify as many insects as possible.

10. Make a collection of different kind of galls - oak, goldenrod.

Science

Weather

1. Watch for changes in cloud formations. Identify the clouds, Make observations of cloud layers and heights.

2. Identify wind direction and speed.

3. Make observations in temperature differences in the sun-shade-wind-calm.

4. Discuss the effect of weather on living things. Find evidence where the weather has affected living things.

5. Use portable wind gauge during the day to plot and record wind velocity.

6. Operate a weather station. Be familiar with the names of the equipment, use, and purpose.

7. Note temperature differences in -

sun-shade	deep snow-shallow snow
wind-calm	surface soil-sub soil
snow-ice	

Trees and Leaves

1. Identify trees according to their bark-leaves-branching-fruit.

2. Make a scientific collection of leaves.

3. Observe the oddities in tree growth - twist, nodules, etc.

4. Compare the kind of trees growing in the forest-fringe area and along the river.

5. Observe the root structure of trees in Deep River.

6. Discuss the uses of trees and their value to man and animals.

7. Identify trees according to their bark, leaves, branching, fruit, species.

8. Make a scientific collection of leaves.

9. Observe the oddities in tree growth -- twist, nodules, etc. Why?

10. Compare the kind of tree growing in the forest-fringe area and along the river.

11. Observe the root structure of trees.

12. Discuss the uses of trees and their value to man and animals.

13. Make a collection or list of "What Grows on Trees."

14. Make a collection or list of "What Lives on Trees."

Rocks and Fossils

1. Classify rocks according to how formed; water-fire changed.

2. Make a collection of rocks as to color - composition - weight - texture.

3. Collect rocks according to hardness, layering, crumbliness.

4. Observe the effect of weather on rocks, rain-ice-sun.

5. Visit the rock quarry and observe the rock strata. Discuss how it was formed.

6. Turn rocks over to see "what lives under rocks." Replace the rock.

7. Make a rock collection as to classification and name of rock, sedimentary, metamorphic, igneous.

8. Identify as many rocks as possible.

9. Identify rocks native to this area.

10. How did rocks not native to the area become located in this area?

11. Observe the rock strata.

12. Observe the flood plains. Discuss the meaning of flood plains.

13. Observe the bank graduation in Deep River.

14. Look for various kinds of fossils.

15. Discuss how fossils are formed.

Birds

1. Identify birds as to surrounding-size-song-shading.

2. Make a list of birds sighted. What bird was seen the most number of times?

3. Try to find food that birds might eat. Discuss if all birds eat the same kind of food.

4. Try to identify a bird according to the song.

5. Observe the coloring of birds and how they are camouflaged.

6. Identify birds as to surrounding-size-song-shading-sweep-shape.
7. Make a list of birds sighted. What bird was seen the most number of times? The least?
8. Try to find food that birds might eat. Discuss if all birds eat the same kind of food.
9. Try to find bird nests or homes. Notice the size and construction.
10. Observe how birds fly, glide, dart.
11. Discuss the ways birds help the balance of nature.
12. Compare the birds of the winter and spring.
13. Discuss the migration habits of birds.
14. See how many birds you can identify according to their song.
15. Observe the coloring of birds and how they are camouflaged.
16. Discuss the kind of food birds eat in respect to the type of bill.
17. Take home a bird nest (one no longer used). See what grows when it is placed in water.
18. Examine a bird scat or hawk or owl pellet. What do they eat?

Water Life

1. Discuss the importance of the river and how it has changed with the passing of time.
2. Discuss the direction in which the water flows.
3. Watch for tadpoles, insects, fish, animals.
4. Look for evidence of animals along the shore.
5. Discuss the effect of water on soil. Floods and their effect.
6. Discuss the importance of conservation of water.
7. Discuss the importance of conservation of water on the national level.

Animals

1. Look for animal homes.
2. Look for animal tracks along the river and paths.

3. Look for food that a rabbit, deer, or racoon might eat.
4. Look for animals gathering food.
5. Examine rabbit pellets. What do rabbits eat.
6. Make a plaster of paris cast of animal prints.
7. Observe the way animals move; hop-waddle-slither.
8. Observe the way animals eat.
9. Follow animal tracks along the river bank and paths.
10. Try to locate the place that a deer may have bedded down.
11. Observe animal tracks as to hoofed, clawed, webbed.
12. Observe how animals protect themselves; coloring-shapes.
13. Observe how some animals have more than one door to their home.
14. Measure the distance between steps.
15. Try to identify animals by their tracks.

Plant Life

1. Collect different kinds of seeds and observe how they travel
   gliders-maple, pine seeds
   parachutes - dandelions
   hitch hikers-pitchfork, burdock
   explosives - clematis
   sailors - sedges
2. Observe and compare the structure of various flowers.
3. Identify a few of the common flowers.
4. Discuss the flowers and note the buds that are not out as yet.
5. Smell the various kinds of flowers. (Watch out for bees)
6. Feel the texture of the leaves and stems of the various plants.
7. Discuss how plants have protective weapons.
8. Observe how some plants live in the shade, sun, and along the river.
9. Sketch the blossoms and leaves of the various plants.
10. Observe and compare the size and shape variances in the same species of plants.
11. Observe evidences of plant photosynthesis.

12. See how many plants you can find that are edible.

13. Try to identify the uses of some of the plants.
berries - dye,food sedges - hold the soil

Insects

1. Observe the activity of an ant hill.

2. Look to see what lives under a rock-log-on bushes.

3. See how some insects blend into their surroundings.

4. Observe how insects are helpful or harmful.

5. Observe the activity of a tent caterpillar.

6. Note the life cycle of some of the insects.

7. Observe how many insects move. Discuss why this is important to their way of life.

8. Try to identify as many insects as possible.

9. Make a collection of different kinds of galls - oaks, goldenrod.

10. Observe the color and design of insects.

Soil Conservation

1. Observe and feel various textures of soil; sand-loam-clay.

2. Discuss the importance of water to soil.

3. Observe the effects of floods on soil. What can man do to keep soil from washing away?

4. Observe how nature prevents soil erosion -- roots, leaves, branches.

5. Observe how man prevents soil erosion -- check dams, plants.

6. Examine examples of erosion and discuss how it happened and how it can be controlled.

7. Examine and discuss what makes the earth crack and cake on top.

8. Make samples of soil needed for woodland trees and compare it to soil needed for prairie flowers.

9. Make some soil tests and compare the different areas as to what plants are within the area.

10. Observe and discuss evidences of gradational and tectonic forces.

Other Activities

A. Children's Collections

1. Turtles
2. Mushrooms
3. Pond life
   a. plants
   b. fish
   c. tadpoles
4. Spiders
5. Insects
6. Plants
7. Leaves
8. Bird nests
9. Toads
10. Rocks
11. Fungi

B. Special Trips

1. General nature trips
2. Tree identification trip -
3. Pond life trip

C. Daily Discussions

1. Orientation
   a. observe displays
   b. Create general interest
2. Birds
   a. calls
   b. birds normally found in area
3. Trees
   a. identification and labeling
4. Wildlife
   a. habits and characteristics of local animals
5. Water Life
   a. aquatic life
   b. fish and insect life

D. Nature Center

Purpose of the Center

1. Serve as a focal point for nature activities in the camp
2. Place for investigation and research of those things discovered along the trail
3. Place to stimulate interest in the natural world
4. Place where a wide variety of interest in the natural science could be dealt with
5. Provide materials, equipment, and displays for group and individual nature study and craft projects
6. Place where items collected during the week could be observed and studied
7. Relate nature program to the emphases of communication in nature

Objectives

1. To stimulate interest and awareness in the natural world
2. To convey wholesome attitudes and values in nature
3. To convey a simple understanding of the natural world
4. To emphasize communication processes in nature

Program

Permanent displays and materials

1. Ant hotel
2. Rock display
3. Tree cross-section
4. Tree labels
5. Bird chart
6. Animal display
7. Aquarium
8. Books and resource materials
9. Craft materials
10. Craft display

E. Games

A Game of Identification

See if you can find the answers to the following questions on your way to the Outdoor Educational and Recreational site.

1. Can you identify the route you are taking?

2. People make their living in many different ways. See if you can find people working at the following occupations:
   - Bus driver
   - Nurseryman
   - Storekeeper
   - Teacher
   - Truck driver
   - Farmer
   - Mailman
   - Carpenter
   - Steel worker
   - Highway construction worker
   - Taxi driver
   - Policeman (City and State)
   - Milkman
   - Auto mechanic

3. How many different animals can you see?

4. How many different birds can you identify?

5. What kind of crops can you see between school and the site?

6. What important buildings can you identify?

7. Other questions can relate to:
   a. Type of trees
   b. Buildings-construction
   c. Park identification
   d. Rivers
   e. Stores
   f. People
   g. Farms-questions relating to farms
   h. Railroads

F. The Weather Station

1. Location
   The weather station should be located in the central area about 40 feet from the flag pole.

2. Objectives
   a. To make the camper aware of something that is always with him - weather

b. To aquaint the camper with the sample instruments used in weather forecasting

c. To develop in the camper a sensitivity for the winds, clouds, pressure, humidity and their meaning

d. To develop in all campers how to read and make a sun dial

3. Program

Preparation

Build a new base for the weather station
Repair the weather box
Paint the weather station
Preparation of all home made instruments
Preparation of material for making some weather instruments

On Site

Each day the counselors of a scheduled unit brought their campers to the station. A session of about one hour was devoted to the weather station, all of its instruments, and application of each. This session was an effort to help the camper get better acquainted with the environment and closely predict the weather for the following day.

After the instruction period, the campers would take their reading of the instruments, study wind direction and type of clouds, and make their general prediction. One camper from each unit had to give the weather report during the campfire or during the flag lowering ceremony.

4. Students Introduced to the following:

a. Dry and wet bulb thermometers
b. Barometers
c. Hi - low thermometers
d. Cloud formation
e. Wind direction and velocity
f. Percent of overcast
g. Character of the atmosphere
h. Rain Gauge
i. Existing weather
j. General prediction

2. Mapping the Trail:

Materials: pencils, compass, ruler, and graph paper

Hikers must first know the length of their stride. This may be done by first going to the pacing area and pacing off the marked distance, then the sections on the graph paper must represent a certain number of strides or feet. A rough sketch of the trail can be made by using the materials above and marking the distances on the graph paper. As soon as possible after the hike, the rough sketch should be transferred to the actual map. Proper symbols should be used to indicate the nature of the area and objects along the way. For a more thorough discussion of map making, the leader is referred to Mitchell and Crawford, Camp Counseling, Pages 224-230.

Estimating Distances, Heights, Etc.:

Measuring the height of trees or the distance across Deep River are challenging activities for hikers. The amount of broadfeet of lumber in a tree may also be determined. The use of an increment board or Biltmore stick will make this possible.

Distances (Pacing or Striding)

Distances are measured by striding or pacing - A stride is a double walking step, counted at normal stride. Measure a line 100 feet and count strides (2 steps left, right) both ways and divide number of strides into 200 feet. This will give you your average stride. (Usually between 4 and 6 feet)

3. Hiking the Trail

Most groups using the hiking trails will leave from the day camp area. Hikers will walk west along the main road, to the bend where the track road joins the main road. This track road is then followed to the Warner House. From here, the trail pushes into the woods near the house.

1. Each hiker should carry a canteen of water.
2. Appropriate footwear is of utmost importance.
3. To decrease the incident of chigger bites, use powdered sulphur on feet and ankles.
4. Keep hikers on the trail, for their protection and the protection of the plant life along the trail side.

Things to do on the Trail:

1. Tree identification:
   Materials: Tree key to Deep River Center and a tree identification guide book
2. Flower identification:
   Materials: A guide book to wild flowers
3. Bird identification:
   Materials: A guide or book on Birds of the Area

Often, hikers will see some of the more common birds such as the Cardinal and the Goldfinch. Many of the birds may be identified by listening for their songs. The leader must have an acquaintance with bird songs to make this activity successful.

Correlation of Mathematics and Art

Concept: Finances of Trip to Deep River

Preparation

*1 1. Each pupil will prepare a budget book of expenses.
2. Cost of the bus per class.
3. Cost of the bus per pupil.
4. Cost of the bus for six groups.
5. Miles per gallon the bus gets on trip.
6. Cost of gasoline for the two way trip.

*2 7. List of articles and cost of articles at the trading post.

On Site

1. Each pupil will look at budget book and determine how much he is to spend.
2. Cost of bus and gasoline just one way.

Follow Up

1. Each pupil check budget.
2. Figure gasoline used.
3. Class total for article bought at store.

Concept: Operation of Trading *3

Preparation

1. Each teacher must have price list of all articles available for sale.
2. Cost of utilities at post must be figured.
3. Each pupil must determine what he wants to purchase and budget accordingly.

On Site

1. Go to the post and let each pupil purchase necessary items.

Follow Up

1. How many stayed inside of budget?
2. Problems can be made up as to so many articles at such a price.

Art *1.) In "Budget Book", include symbols of what the expenses will be.
1.E. - draw bus, draw clothing that should be worn etc.,

Art *2.) Create your won own "Trading Post" in classrooms; set up a display, and make the articles in the post - (1.E, leaf book, tree book, post cards, wood carvings, etc.)

Art *3.) Creating your won own "Trading Post" in the classroom -- making articles for sale.

Cook Out

Preparation

1. Class decides what it wants to eat.
2. Committee will go to store and determine cost of articles.
3. Entire class will figure cost of total articles per pupil.
4. Must remember charcoal, plates, utensils and other consumable goods.
5. How much of each article each pupil will eat. Ex: one hot dog per person.

On Site

Follow Up

1. How close was the amount of food bought used up?
2. Disbursement or collection of more money
3. What to do with left-over articles.

Estimating Distances and Time

Preparation

1. Each pupil look at map of the city and using scale determine distance to camp
2. Figure distance both ways for trip. *4
3. Figure the time it will take the bus going so many miles at 30 m.p.h. to arrive at Deep River.
4. Have class practice estimating distances around the school and then measure to determine accuracy.
5. Study the position of the sun from the classroom and estimate the time of day by the sun.
6. Mark off a set distance and determine how long it will take to walk that distance.

Measuring Areas of Land

Preparation

1. Each pupil will make a 25 ft. piece of string and tie knots in it every foot to measure with at camp.

Art *4). Form 3rd dimensional map to scale, duplicating the terrain. Form terrain from dough mixtures, salt doughs, clay, papier mache', etc.

2. Review the formulas for a rectangle, square, and triangle. These types of shapes will be available for measuring.

On Site

1. Have students measure the area around the lake following the fence. Then have them figure how many square feet of water there is in the lake.

2. Have a pre-measured distance and let each child estimate, then measure this distance.

Measuring circumferences of trees

1. Review formula for circumferences.
2. Using their knotted line have the pupils measure 3 different size tree trunks. Record this data in note to figure out back at school.

Planning time schedules

Preparation

1. Each pupil will have a list of what there is to see and do at the camp.
2. In their notebook each pupil will record what time they arrived and departed at each activity.
3. The pupils will know when the bus will arrive at school. They will figure the speed, miles there, and possible delays to determine the time of arrival.

Follow Up

1. Review notebooks to determine how close the schedule was followed.

Scale drawings

Preparation

1. Review or cover section in text that relates to scale drawings.
2. Pre-determine what scale will be used for figuring areas at Deep River.

On Site

1. Using string, measure off areas and record data in notebook.
2. Find an insect and measure it. *5
3. Measure a rock. *6

Follow Up

1. Take measurements from notebook and figure areas using your own scale.

2. Take measurements of rock and insect and enlarge it 5 times, 10 times, etc.

Art *5.) After measuring insect, sketches by pencil, corte' or charcoal could be made.

Art *6.) Students could preserve the actual insect (that was measured) or measured rock, in acrylic plastics, using catalysts.

Location of Stars

Preparation

1. Review in class the chapter or stars in text
2. Have pupils learn location of these stars so they can easily find them.
3. Have pupils discover the different shapes of the constellation.
4. Read myths and other stories about constellation. *7

On Site

1. This trip must occur in the early morning. (4 a.m.)
2. Use binoculars and telescope to point out the stars constellation.
3. Make a contest up as to who can find the most constellations.
4. Record in notebook all stars identified.

Follow Up

1. Go over all stars and constellations identified.
2. Determine why some of the stars, planets, etc. were not visible.

Wind Velocity

Preparation

1. Make in class, out of old sheets, a funnel-shaped wind catcher.
2. Also from an old sheet, make a flag that the wind can blow to determine if the wind is blowing very fast.
3. Using a stick and four cups, make a windmill to determine if the wind is blowing very fast. *8

On Site

1. Using above apparatus, set up a section for the telling of wind direction and speed.
2. Check this 3 times during the day to determine if there has been a change in the weather.

Follow Up

1. Discuss the direction that the wind blew from.
2. Was it faster in the morning or the afternoon?

Act *7 Form a notebook of drawn constellation.

Act *8 Draw a windy day! This makes children think about how wind looks! 1.E., Windy day in Summer (sail books); Fall (leaves direction); Winter (snow drifts); Spring (rain).

Heights of Trees

Preparation

1. Tell students of direct measurement and indirect measurement.
   a) Direct - when the actual object is measured with a ruler.
   *9 b) Indirect - when a pole casts a shadow and the shadow is measured. The ratio for indirect measurement is 5:4, or $\frac{5}{4}$.
   Example: $\frac{5}{4} \times 36' = 45$ ft.
2. Find a pupil who is exactly 5 feet tall. This pupil will be used in determining the height of trees.
3. Review the formula for a triangle.

On Site

1. Measure a tree by indirect and direct measurements.
2. Have student stand beside tree and estimate how tall the tree is by using the students 5 ft. height.
3. Use the shadow and indirect method to determine the triangle. Then work out mathematically.

Determining Ages

Preparation

1. Each class will take along a hammer, nails, small knife, and some vinegar

On Site

1. Find a tree and measure the circumference. Figure about one year for every $\frac{1}{4}$ of an inch.
2. Find small stone and crack with hammer and count layers. *10

Follow Up

Geometric Shapes in Nature

Preparation

1. Review in class the basic shapes *11

On Site

1. Find a leaf and examine for a variety of shapes. Place under microscope and futher examine.

Art *9 Sketch the time of day by drawing trees with their shadows; make this exact, using indirect and direct measuring on tree and shadow.
Art *10 Sketch a "young" tree beside an "old" tree. Note differences.
Art *11 Study shape with its relation to design.

2. Determine what shapes the land is divided by natural and man-made boundries
3. In the winter, examine snow flakes for shapes.
4. Place a stone into the water and watch the shapes the ripples create.
5. Notice shapes in the sky by cloud formations. *12

Follow Up

1. List on board all shapes discovered.
2. Explain how some shapes were formed in mixture.

Art *12 Record in a notebook, by drawings, as many shapes in nature, as you can find.
You may use these in a design concept later.

Physical Education

General Objectives

1. To develop wholesome mental attitudes and habits
2. To practice good health habits
3. To plan and practice wholesome use of leisure time
4. To keep physically fit
5. To develop an awareness of safe practices in the outdoors
6. To integrate health and physical education with other subject matter areas

All activities mentioned here have definite meaning and importance in the life of the child of this age. Many of the sports selected are life long activities which should develop the child. The activities that would be chosen will be determined largely by the following elements:

a) The interests and abilities of the group
b) The interests and aptitudes possessed by the leaders
c) The amount of time available for the activities

All activities in our program will be inter-related with other areas of the curriculum as much as possible. It is our desire to create the best possible learning situation and to develop the child towards a successful outdoor learning experience.

The following will have information about some interrelated activities practical for the school camp situation.

Hiking

Creative Dramatics

Story Telling - (short stories)

Songs and Stunts

Compass Games - Orienteering

Campfire Areas and Program

Fall Program

Outside Activities

Water safety and Aquatics - First Aid

Boating

Canoeing

Hiking

Archery

Volley Ball

Horseshoes

(Flag raising and campfire program)

Rainy day activity

Games of low organization

Obstacle Course

Indoor Activities

Quiet games

Stories - Stunts - Skits

Group singing - Ping pong

General recreational activity

Games

(All activities mentioned will be inter-related with other areas of the curriculum as much as possible)

Winter Program

Outdoor Activities

Water Safety

Ice Skating

Ice Fishing

Tobagganing

Ice Hockey

Sledding

Skiing

Hiking

(Flag raising and campfire program)

Obstacle course

Games of low organization

Rainy day activities

Indoor Activities

Quiet games

Stories - Stunts - Skits

Group singing - Ping pong

General recreational activity

Games

(All activities mentioned will be inter-related with other areas of the curriculum as much as possible)

Spring Program

Outdoor Activities

Water Safety and Aquatics - First aid

Canoeing

Boating - Fishing

Hiking

Archery

Volleyball

Horseshoes

Obstacle Course

(Flag raising and campfire program)

Rainy day activities

Games of low organization

Indoor Activities

Quiet games

Stories - Stunts - Skits

Group singing - Ping pong

General Recreational Activities

Games

(All activities mentioned will be inter-related with other areas of the curriculum as much as possible)

General Recreational Activity

Hiking the Trail

Most groups using the hiking trails will leave from the day camp area. Hikers will walk west along the main road, to the bend where the track road joins the main road. This track road is then followed to the Warner House. From there, the trail pushes into the woods near the house.

1. Each hiker should carry a canteen of water
2. Appropriate footwear is of upmost importance
3. To decrease the incident of chigger bites, use powdered sulphur on feet and ankles.
4. Keep hikers on the trail, for their protection and the protection of the plant life along the trail site.

Hiking Ideas and Nature Games

Leaf Relay

Equipment: As many leaves as possible, using however, only ones that are typical of the species. All must be identified.

Play: Two lines seated facing each other (limit to 6-8 and if more students, divide into several groups). Each line numbers off, starting at opposite ends. Leader holds up leaf and calls number, the two with that number names the leaf, The first correct one scores a point for his team. Twenty points is the game. To repeat, different leaves may be used, or, at least, have students change places and take new numbers.

Nature Drawing Game

Teams send one representative equipped with pencil and paper to leader who assigns in a whisper the name of some object (squirrel, daisy, etc.) to be drawn. Representative runs back to them and draws objects. First team to guess object correctly wins point. Then teams sends up another representative for assignment. Have as many assignments as students on the team.

A Color Hike: How many - on what. Group makes collective list as they go along. At meeting place, play a game.

Formation - Relay teams

Procedure - Each member in line represents a different color, whispered in her ear by leader. Leader stands at goal. Says "Blue bird's breast" Student with color red should run to goal and say red. If blue or yellow run, or if red fails to "come to" in time, the point is lost. Point for correct color and for speed. As Dr. I.Q. says "No promoting, please" or game is spoiled.

Scavenger Hunt: Divide your group into teams of three or more persons. Each team is given a copy of a list or articles to collect. A time limit may be set of of articles to collect. A time limit may be set and the team that finds the most articles wins, or the first team to return with everything may win, if a time limit is not set. The team must go in a group and not scatter.

Listed below are suggestions for a Nature Scavenger Hunt. Be sure to suit the articles to the limitations of your particular age group.

1. A last year's bird nest
2. A four leaf clover
3. Three violet leaves
4. Two fishing worms
5. Five acorns
6. Three weeds
7. Two square inches of moss
8. Feather of a bird
9. Five black pebbles
10. Two shells
11. A piece of cedar
12. A snail

Treasure Hunts:

A treasure is hidden. Clues are scattered in the vicinity of the treasure.

If your group is large, divide them into foursomes or the like and start them off at intervals. The group follows the clues until they find the treasure.

Yarn Hike:

Materials- Yarn

Method - Tie small bits of brightly colored yarn to bushes and trees to mark a trail. Let the whole group follow the trail and have the materials for a new craft or special game at the end of the trail.

Color Hike:

Materials - None

Method - Divide the group into two teams. Each team chooses a color and during the hike lists all the items seen of the chosen color. The team with the longer list wins.

Stake a Claim Hike:

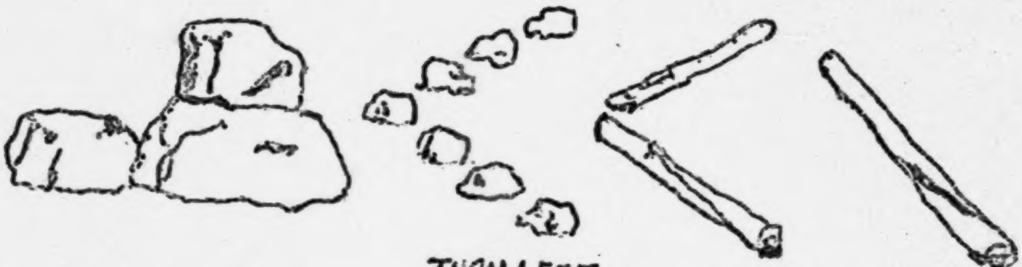
Materials - A length of string six feet long and a piece of paper and pencil for each three players.

Method - Divide the group into small groups of three. Hike to a nearby vacant lot or park and have each group stake a claim by marking off an area on the ground with its piece of string. Each group lists the different things (for example: grass, bugs, stones, etc.) that they find in their claim. The group with the longest list wins.

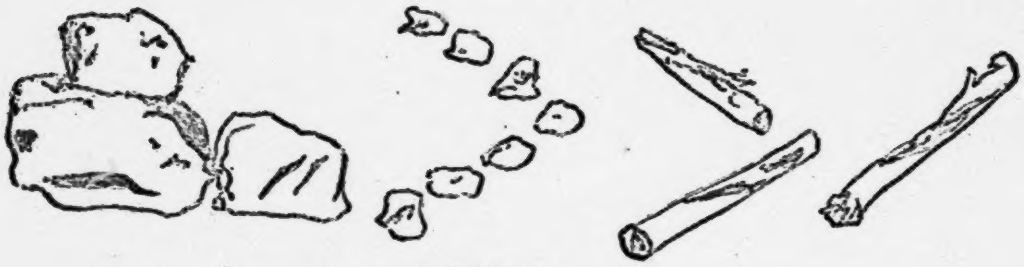
Trail Sign Hike:

Materials - Stones, sticks, or grasses found on a hike

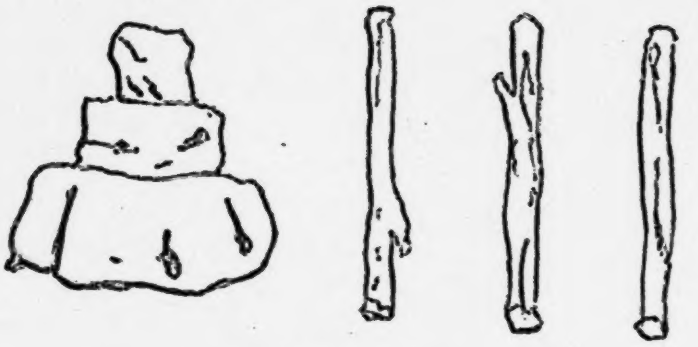
Method - Divide the players into two teams. The first team is given a head start (ten minutes) and lays a trail of stones, sticks or grasses. The second team then follows the trail. Grass trail markers are made by bending grass in the direction to be followed. Sticks are laid on the ground in the correct direction, stones are piled in groups of three, two on top of each other and the third in the direction of the trail.



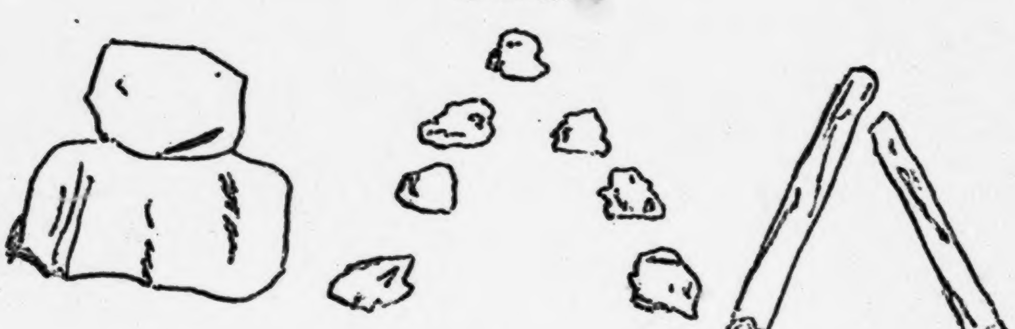
TURN LEFT



TURN RIGHT



WARNING



THIS IS THE WAY

Nature Games

Sounds: - The teams, or individuals, sit quietly for ten minutes and at the end of that time each one recounts the noises she has heard and can identify. Sounds may be the rustle of winds in the leaves, birds, crickets, frogs, sound of water or of rain, and noises made by animals. The team whose members distinguish the greatest number of sounds correctly wins.

Tree Identification:

Set of cards for each team with the name of a tree on each card. Cards are placed in a pile a few feet ahead of each team. The number ones each pick up a card and find the tree it names, label it, and return to their teams. The number twos go, and so forth. Leaders check to see whether trees are correctly labeled. The team that labels the greatest number of trees correctly within the time limit, wins. Cards may be prepared for plants, ferns, mosses, etc., and the game may be played by having all the girls start at once.

Leaf Hunt:

The group is divided into teams and each team is given a list of trees within a small radius of the playing space. As a *signal* from the leader, members of each team run to procure a leaf for the list. The first team with all of the leaves correctly brought in, wins. Be sure that trees and shrubs are not harmed when leaves are taken from them.

Watching the Trail:

This game is especially adapted for hikes in the country. The crowd agrees on a list of objects, such as birds, plants, flowers, or fungi that they are to look for on their hike, and the first person who sees any one of the objects named scores for his team. If the object is to hunt for flowers particularly, you could decide on what flowers are up this time of the year and give points for discovering them according to their commonness or scarcity.

Wild Flowers Hunt:

Materials - Two sets of tags on which are written the names of common wild flowers that can be found in the playing area.

Method - Divide the players into two teams. Give each team a set of flower tags. The players hunt for the flowers named on the tags. When they find a specimen of each one, they leave the tag by the flower. The team which finds all of the flowers listed and "tags" them first wins.

The children should be reminded that they must not disturb any of the flowers but are just to leave the tags near them.

Leaf Snatch:

Materials - Leaves from each of the various common local trees. Use these leaves for making spatter and crayon prints described in the section, "Arts and Crafts." When the children are finished making the prints and are therefore more familiar with the leaves, use one of each kind of leaves to play leaf snatch.

Method - Divide the players into two teams. Line the teams up facing each other about twenty feet between them. Number the players on each team, starting with No 1 at the head of one line and at the foot of the opposite line. The leader stands to one side and calls out a tree and a number. The two players who have that number runs to the tree.

Sand Sculpture:

Some day when the water is too cold or rough for swimming, try a sand sculpturing contest. The contest can be for children working either individually or in groups. Each player, or players, make some design in wet sand. Winners are chosen either by a judge or by the vote of the group.

Star Pictures:

Divide into two teams and give each fifteen paper stars. The number one players in each file comes forward to look at a diagram of a constellation shown them by the leader. They then return to their teams and place their paper stars to form the constellation, run to the leader and name the constellation. The leader or team leaders together may decide which constellation is best. The number threes then look at another constellation and so on.

I Am Thinking:

Teams in files, the leader says, "I'm thinking of ________" and goes on to describe an animal whose actions can be easily imitated, such as a rabbit, frog, cat. As soon as the number ones in file recognize the animal they imitate its walk for a definite distance and then go back to their files. Another animal is described and number twos do the imitating, and so on. The team giving the best series of imitations wins.

Seeds of Trees:

Divide into teams and number players consecutively. Leader calls out one of the following "Nuts", "winged seeds", "cones", "berries ." The first number one to run up to the leader and give a correct example scores for his team. Number ones then go to the end of the file and twos have a chance. Example: leader, "nuts" -- answer "hickory"; leader, "winged seeds" -- answer "ash."

Match It:

Cut leaves or twigs (not both for the same tree game) into three or four pieces. Shuffle the parts in a bag and let each student have a piece. At a given signal, players try to find the rest of their leaf or twig. The first group to do so, wins the game.

Silhouettes:

Cut out silhouettes of common trees on heavy paper. Divide players into groups - - two teams. The leader holds up silhouette and the player who can identify it, gets it for her team. When all the pictures have been identified, the team with the most wins.

Touch:

This game must be played where there are many trees of a number of different varieties. The leader calls the name of a tree and the last player to tag that kind of a tree is the loser.

Tree Baseball:

Players are divided into two teams. The four corners of a room or other suitable place, are designated as the tree base and home plate. The leader is the pitcher. When the first player comes "up to bat" the leaders ask a question about trees. If the player answers it correctly she goes to first base, and if she does, she must attempt to answer a second question. Other wise she remains on first base and the second batter is up. If the second batter answers her questions correctly, she moves to first base, advancing the first player to second base. Three outs retires the side and the team with the most runs at the end of a given number of innings wins.

Leaf Scavenger Hunt:

Give each team a list of trees. The team that brings a leaf from each of its tree first, wins.

Squirrel in a Tree:

Group divides into couples and couples scatter. Join hands with partner (trees) a third person (the squirrel stands between them). One person is "extra". At a signal, all the squirrels must leave their trees and run to a new tree. The one left without a tree becomes it.

Trailing the Deer:

Two students are chosen to represent two deer. The deer are given pebbles (or use other trail signs). The other members of the unit divide into two teams while the deer lay a trail. The two deer hide together within a radius of 15 yards from the end of the trail. The team who finds the deer wins.

Rock, Tree, and Bridge Relay:

Students are divided into two or more teams. Three students are selected from each team. They stand at the opposite end of the play area, where they are the rock, tree, and bridge for their respective teams. The rock crouches, the bridge stands behind the rock with her legs apart. The tree stands behind the bridge. The players must go over the rock, under the bridge and around the tree. They return in the same manner. The first team having all players complete their turn, wins.

Stalking the Leader or Statues:

Team stands on line some distance from the leader, who stands with her back to them. Students advance toward leader while he counts to ten. He then turns toward others. Anyone seen to move must return to the starting line. The first person to touch him becomes leader.

Call Ball:

Players are in a circle and are numbered. "It" throws the ball up, calling a number. The person with the number called must cathe the ball before it touches the ground. If he is successful, he becomes "It."

Shell Collections

A beach activity that appeals to many children is shell collecting. Go on a "beach comber's expedition" to find shells at the water's edge. The shell found on ocean beaches are of course more extensive in number and variety than on fresh water beaches, but the fresh water child can have fun too if he adds interesting bits of stone and washed glass to his collection of shells.

Fishing

If there are any fish at all in the local lake or stream, girls as well as boys will enjoy a day of fishing. Tie "penny" hooks from nearby hardware store to poles made out of dead tree branches. Consult local fisherman concerning suitable bait.

Rainy Day Nature Games

What's in the Sky

Paper stars needed and teams placed in files. The leader holds up a card on which the stars of a constellation are placed in their right positions, and gives the players a few moments to study it. Number one of each file picks up a star, puts it in place as the first star in the constellation, and runs to the end of the line. The next person in line puts the second star in place, and so on. The team that first completes the constellation correctly scores a point.

Game of Touch

Players sit in a closed circle. Nature objects are passed around from person to person behind the back. After all objects have passed, each person tries to write down the different objects that passed through their hands. No peeking- One point is allowed for each correct answer. Here, are some of the objects that could be used: grass, acorn, stone, leaf, lump of sugar, etc.

Artist

Divide in teams and number consecutively. Give each team paper and pencil. Number ones go to leader who whispers a word as rock, bird, cow, tree, leaf, acorn, etc. in their ears and they rush back to teams to sketch a picture depicting the word. Person who sketches cannot talk; she can just say "yes" or "no." Team to guess word first wins one point. The number twos and so on up.

Nature Alphabet

Individual players or members of teams name objects beginning with a letter called out by the leader. Point for each side as they call out. Run through alphabet once. Team with most points wins.

Gyp

One of the group is "it" and leaves room. Others decide on a bird or flower animal. "It" returns and ask questions which can be answered only by yes or no in the efforts to discover the name of the bird.

Relays

Imitating animal's voice, walk, etc.; knots, trail signs.

Secret Leaves (all ages)

Equipment - Leaves

Method - Students are divided into teams, each team numbered. On signal, number one runs to the leader who shows them secretly a leaf. They run back to their teams and describe it as accurately as they can but do not name it. When team has decided what the leaf is, number ones return to the leader and the first team to name leaf correctly wins. For the next round, number twos look at a different leaf.

Variation - This may be played with rocks, shells, or pictures of trees, flowers, birds, constellations, insects or animals.

Who Am I

Materials - Pictures or slips of paper with the names of common birds.

Method - Pin the picture or name of a different bird on each player's back. Players may ask each other any questions which can be answered by "yes" or "no" in an effort to identify them.

Quiz Baseball

Materials - None

Method - Players are divided into two teams. Four corners of a room, four trees, or four other suitable places are designated the three bases and home plate. The leader is the pitcher. When the player comes up to bat, the leader asks him a question about nature, the bible, the news, or some other topic. If the players answers it correctly, he goes to first base, if he misses, he is out. The player who answers correctly is then asked by the pitcher if he wishes to try for a two base hit. If he does, he must answer his question correctly, he moves to first base, advancing the first player to second base. Three outs retire a side, and the team with the greater number of runs at the end of a given number of innings wins.

Snow Games

Hints:

Before completing plans for a winter outdoor program, look over the games in other sections. Nature games, cross-country and stalking games may be easily adapted to a winter scene. In planning any winter games, remember to suggest warm clothing before the students go outside, and keep everyone moving so that the students will not get chilled. Games are not fun when a person is cold.

Eskimo Bank

Intermediates and Seniors

Equipment:

Walnuts or large buttons

Method:

A large circular hole is dug in the snow. An equal number of walnuts is given to each player. One player, the "banker," stands near the hole or "Bank." The other players stand about ten feet from the hole and each takes his turn at pitching walnuts into the bank. Player receives from the banker as many walnuts as he succeeds in pitching into the bank. Game may continue for several rounds as less skillful are eliminated. Player left with largest number of walnuts becomes the banker and opens his own bank.

Snow Rolling Contest

Equipment:

Measuring tape

Method:

Each contestant makes her own snowball, not more than six inches in diameter. When the signal is given each player starts rolling her snowball, making it as large as possible within the allotted time. The player whose ball measures the most wins the contest.

Games From Other Countries

English Game -- Pass the Fox

The fox is a familiar figure in English life, and the game named for him is familiar to everyone. "Pass the Bag" or "Pass the Ball" we call it. "Pass the Broom," says Canada. "Pass the Flower," "Pass the Candle," "Pass the Bone," "Pass the Hot Potato," "Pass the Fish," say other countries. No matter what it is called, it is always fun.

Equipment:

Players sit in a circle. An article, the fox, is passed rapidly from player to player. At a clap of the hand or if music is used, when the music stops for a moment, the object is passed in the opposite direction. Whoever drops or fumbles the object must either pay a forfeit or go to the center of the circle, depending on the way the troop decides to play the game. Singing or recorded music with a quick tempo helps to keep the game moving.

Scottish Game -- Magic Ball

Equipment:

One Volley Ball

Method:

A river ten feet wide is marked out with stakes or stones. All patrols are on one side of the river. The leader puts the ball in play by throwing it high in the air. Whoever catches it before it touches the ground shares its magic properties and is able to walk across the river. From the other side she throws the ball over to one of her own patrol while the others try to intervene. Anyone stepping into the river in the excitement of the game loses a life and after three lives have been lost she is considered drowned and must drop out. The team that first gets all members safely across wins.

Note: No one may cross the river in safety unless he holds the magic ball, which he has caught before it touches the ground.

Mexican Game -- Cock Fight

In almost any country, boys and girls have games or tricks in which the main idea is to pin something unknown to a person on that person's back. This one comes from Mexico.

Equipment:

Colored strips of ribbon or paper.

Method:

Circle formation with leader standing in the center. Leader selects two players from circle. They represent two cocks. They stand back to back while the leader pins a piece of colored ribbon or paper on the back of each. The cocks then face each other. Each tries by moving or jumping about to discover the color of ribbon or paper on the back of her opponent, without letting the opponent catch a glimpse of the color on her own back. The winning cock is the one who first discovers the color of the ribbon or paper. These two cocks then return to the circle. Two other cocks are chosen.

Creative Dramatics

Potentially the most valuable of the arts in a camp program is drama, for not only may it integrate and focus all the other arts, but its basic stuff is the give and take of social living. Because the leader helps the campers to make use of their own latent resources, to give form and substance to their feelings and ideas, the dramatizations developed in camp can be beautifully rewarding and satisfying to the participants.

Imagination and resourcefulness are important qualifications of the leader, for he will need to respond to the happenings in the camp in whatever activities he initiates. He needs to be alert in sensing and using the ideas of the campers also, for the more he encourages them, the more creative thinking they will do. Without stimulation from the leader, their creativity often remains on an infantile level.

Though dramatics, as a rule, is not a major activity in camp - swimming, crafts, hikes, cook-outs, nature activities, etc., being naturally of highest importance as camp activities -- with a capable leader, dramatics can play a significant part in realizing the objectives sought by every camp; creative education, social growth and recreation. Certainly, with all its other values to the boy or girl at camp, it has a wonderful power in providing wholesome fun.

NOTHING IS OF TRUE VALUE IN ITS ACHIEVEMENT UNLESS THE CHILDREN CAN HONESTLY FEEL THAT IT CAME FROM WITHIN THEM - - GUIDED YES, BUT THE FINAL DECISION AND CREATION IS THEIRS.

Making a Plan for Guiding

1. The specific goal of each experience is to meet the strongest needs of the group through a specific form of satisfying dramatic expression.

2. Example: How to determine needs of the group at a first meeting
    a) Acquaintance - names, respect and consideration
    b) Express themselves by doing - release energy
    c) Break down social - emotional barriers through dramatization in basic form of rhythmic movement.
        1. "Wind" "Trees" "Animals" etc./related to new adventure
        2. Strive for simplicity
        3. Focus to one thought
        4. Use "Do" action verb
    d) Creative rhythmic expression
        1. Music has power
        2. Dancing in its broadest or heighten a mood
        3. Uses; - to motivate or heighten a mood
            Provide strong rhythmic pattern
            Arouse feeling and thinking
            To tell a story
    e) Bring activity to focal point and give definite meaning to the activity
    f) Leader should evaluate each session in light of what he wished to accomplish through the dramatization.

Suggested Ideas for Dramatization

Walking through the woods
Riding horseback
Wading in the river
Setting up a camp sight
Everybody search and see what he can find
Favorite animals
Find a few of their favorite people or animals they might like to be and have them show how they act
Favorite songs - acted out/danced
Favorite stories
Stories you tell or read to them
A bear visits the camp
Catching a big fish
Visit to a farm
Indian stalks a buffalo or deer

Short Stories to Dramatize

Example: "The Legend of Little Elk"

Many moons ago, there was an Iroquois named Little Elk, who made bows and arrows for the great hunter. In return, they supplied him with food, shelter and warm clothing. For Little Elk's bows were strong and supple and his arrows straight and keen and, with them, the hunters shot many fleet deer.

Another Iroquois called Yellow Eyes, envious of Little Elk said to himself, "I, too, will make bows and arrows and I will tell the great hunters that mine are better than Little Elk's." So he carefully copied everything he had seen Little Elk do and, when his bows and arrows were finished he traded them to the great hunters.

But the great hunters soon discovered that Yellow Eyes' bows were not strong and his arrows did not fly straight, so that they missed many deer. From that time on, Yellow Eyes could find no one who wanted his bows and arrows, but Little Elk was busier than ever before.

The Indian and the Cricket

One day an Indian left his home to visit a white man with whom he had been friendly. Being in a city, with its noises and its crowds was a new experience for the Indian, and he was fascinated by it.

The Indian and the white man were walking down the street when suddenly the red man touched his friend's shoulder and said quietly: "Stop! do you hear what I hear?"

His white friend paused, listened, smiled and said "All I hear is the tooting of car horns, the noise of the street cars and the voices of the people. Just the regular noises of the city. What is it that you hear?"

The Indian replied - "I hear a cricket chirping some where nearby."

Again the white man listened but shook his head. "You must be mistaken," he said, "I hear no cricket, and even if there were a cricket near by, his chirping would be drowned out by all these other noises."

The Indian would not be dissuaded. After a minute, he motioned to his friend, and walking a few steps up the sidewalk they came to a vine growing alongside of one building. He pushed the leaves aside, and there, to the amazement of the white man a tiny cricket was revealed chirping its loudest. Now that he saw the cricket and was close to it, the white man could hear its call.

As they proceeded on their way, he said to his Indian friend, "Of course, you hear the cricket because your hearing is much better than mine. All Indians can hear better than white people."

The Indian smiled, shook his head and replied: "No, that is not true. The Indians' hearing is no better than that of the white man. Watch - I'll prove it to you."

He reached into his pocket and found a fifty cent piece, which he tossed to the sidewalk. As it clinked against the cement, people from several yards around stopped, turned and looked. Finally, one of them picked up the piece, pocketed it and went on his way.

"You see," said the Indian, "the noise made by the fifty cent piece was no louder than that made by the cricket, yet many of your white people heard the noise the money made, stopped and paid attention to it, although they paid no heed to the noise made by the cricket. The reason is not a difference in our hearing, it is a difference in what we have learned to listen to, a difference in the things we turn our attention toward."

Many things are said and done to us and by us as we journey in life, and the things that will count are the things that we have our minds and our hearts turned toward. Living will be better and happier if we learned to tune our minds and our hearts to see, hear, and know the good things rather than the bad. We can carry only so much. Let's be sure that the things we carry are good and not evil.

Questions:

1. How many things have you in your mind now that you would be a lot happier without?
2. What thoughts do you carry around in your mind that make it impossible to be friendly?
3. What advantage is there to carrying some of these things?
4. Sometimes people carry grudges or remember things that have been said about them that they want to forget. Do you think remembering these things make for happiness? What would you suggest instead?

Twenty Tepee Tales: By M. Marvin Lotz and Douglas Monahan,
Association Press - New York - 1950

Example of other stories:

a) "Peter, Paul and Esben-Ash-Lad"
b) "Why an Indian Woman is Called a Squaw"
c) "Paul Bunyan"
d) "The Willy Jackal"
e) "The Silent Wage"
f) "The Locust and the Coyote"
g) "How the Coyote Danced with the Blackbirds"
h) "Why the Ant is Almost Cut in Two"
i) "Five Peas in a Pod"
j) "How the Monkey got his Short Tail"
k) "The Man who was Full of Fun"
l) "Lord Peter"
m) "One Day on Beetle Rock"
n) "The Frog and the Ox"
o) "The Camp on the Big Onion"

Stunts:

Stunts should be amusing, instructive, active, mystifying, but never hurt anyone in any way. They should always be in good taste.

Give the old stunts a new twist. Dramatize funny things that have happened in camp. Use canned stunts sparingly and personalize them.

An open ceremony is a stunt. Make it good for it sets the tone for the whole campfire.

The closing ceremony or song should be quiet and inspirational.

Stunts are classified into: Action, Contests, Mixers, Magic and Educational.

Sources for the stunts include skit and stunt literature, radio and T.V. programs and individual imagination.

Songs:

1. Types of songs: quiet, peppy, action, special occasion, novelty, inspirational

2. What the audience expects from the leader:
    a) The name of the song
    b) The Pitch or Key (Be sure the whole group has it - If too high or too low stop or start over)
    c) The tempo - beating time
       Start and stop together
       Leader visible to everyone
    d) Information about the song
       The words - tune - be sure the whole group knows the song; if they don't teach them
    e) Pep - enthusiasm
    f) Leadership - control
       Plan songs carefully - use common sense in selection
       Don't ask what songs the group wants to sing
       Be prepared beforehand
       Beware of parodies and songs that might offend
       Keep the songs simple

Suggested Song List for Deep River

The following is a list of songs which is being suggested for use in the year's day camp program. Page numbers refer to the Revised June, 1963, ACA song book, "Let's All Sing." They are songs which will be included in camp fire programs during the week. You will want to add new songs to the list.

Examples:

English Hiking Song

Tramp, tramp, tramp, tramp
Tramp, tramp, tramp, tramp
I'm happy when I'm hiking
Pack upon my back
I'm happy when I'm hiking
Off the beaten track
Out in the open country
Tramping all the way
With a real good friend
To the journeys end
Ten, twenty, thirty, forty,
Fifty miles a day

et's Go Hiking

Let's go hiking (are you sleeping)
Let's go hiking, let's go hiking
Down the trail, down the trail
Over the hill and valley,
Over the hill and valley,
Back to camp,
Back to camp.

	Page
A Jogging Along	11
Donkey Riding	11
Railroad Corral	13
Let Us Sing Together	20
Crocodile Song	24
In a Cottage in a Wood	26
Six Little Ducks	29
Upward Trail	31
My Hat	34
The Frogs	41
Make New Friends	44
Each Campfire Lights Anew	45
Whippoorwill	53
Rise Up, O Flame	59
Ol' Texas	63
Now the Day is Over	92

Graces

For Health and Strength	65
God Has Created a New Day	72
Hark to the Chimes	72
Praise for Bread	95

Other examples of graces:

Johnny Appleseed

The Lord is good to me-
and so I thank the Lord
For giving me the things I need
The sun - the rain - and the apple-
seed
The Lord is good to me.

I wake up every day - as happy as can be
Because I know that with his care
My apple trees will still be there
The Lord is good to me.

God Had Created a New Day

God has created a new day,
Silver and green and gold;
Live that the sunset may find us
Worthy of his gift to hold.

Morning is Here "A Grace"

Morning)
Noontime) is here, the board is spread,
Evening)
Thanks be to God, Who gives us bread.

Hark to the Chimes

Hark to the chimes,
Come bow your head,
We thank Thee, Lord
For this good bread.

Back of the Bread

Back of the bread is the flour - and
Back of the flour is the mill - and
Back of the mill is the wind and the rain
And the Father's will.

Traveler's Grace

We thank Thee for all our daily bread,
We thank thee for all our friends so true,
For fields and flowers and mountains high,
The endless space of the sky so blue.

We thank Thee for all the winding roads,
We thank Thee for all the stars so bright,
For desert sands and forest green,
The campfire in the lovely night.

Chinese Grace

Ne'er forget God's daily care;
Health and food and clothes to wear.
Freely we these gifts receive
May we not His spirit grieve.
(Let's all sing - page 71)

For Health and Strength

For health and strength and daily bread,
We praise thy name, Oh Lord.

The Wayfarer's Grace

For all the glory of the way,
For Thy protection night and day,
For roof, tree, fire, - and bed, and board,
For friends, and home - we thank
Thee, Lord.

Oh Give Thanks

Oh give thanks, oh give thanks,
Oh give thanks unto the Lord,
For He is gracious, and His mercy
Endureth, Endureth forever.

(Sing Together - page 13)

Compass and Compass Games

A great number of years ago -- around 2500 B.C. - some Chinese discovered that a certain ore, floated on water on a piece of wood, would turn until one end of it pointed in the general direction from which the sun shone, halfway between sunrise and sunset - the direction - he knew as south, the other end obviously pointed north. Out of that discovery emerged the compass needle - a strip of magnetized steel, balanced on a pin point, and free to swing in any direction, but which will eventually come to rest with one end pointed north.

Finding Map Directions With a Paper Circle

Take a piece of paper 3 inches square, fold it with sharp folds in half, then in quarters, then in eights, finally in sixteenths. Round the free edges with scissors. Open up the paper and mark the folds clockwise: N, NNE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSE, W, WNW, NW, NNW, and N. Place this circular piece of paper with its center directly over you "base of operations", and with the folded marked North, lying north on the map on which you are working. Now, go in different directions from your base, you may follow the fold marked NE and continue into the landscape along this northeast road, or you can go SSE, or in any of the other directions. Degrees can be learned also. (I. E. NO) - 360, S - 180, E - 9, W - 270 etc.

Parts of the Orientating Compass

This compass has three basic parts: A magnetic needle, a revolving compass housing, and a transparent base plate, to find a bearing face squarely the distant point toward which you want to travel. Hold the compass a little above waist line solidly against you, with the direction of travel arrowhead pointing straight ahead of you. Now orient your compass that is; fit the direction on the compass to the same direction in the field - by twisting the compass without moving the base plate, until the compass needle lies over the orienting arrow on the inside bottom of the compass housing, read the degree or the direction - the bearing - on the outside rim of the compass housing at the spot where the direction line, as an index pointer, touches the housing -- then go.

If a degree reading is given to you merely turn the compass housing to the proper degree reading and then turn until the magnetic needle and the housing needle line up and then go in the direction of travel arrowhead.

Remember to pick out a point or object or building ahead of you and then walk toward it. If you lose sight of your goal, recheck your compass reading but be sure not to twist the compass housing once you have set your compass for your direction. If you wish to return to your destination, merely hold the compass with the direction of the travel arrowhead pointing toward you instead of away from you.

Distances (Pacing or Striding)

Distances are measrued by striding or pacing - A stride is a double walking step, counted at normal stride. Measure a line 100 feet and count strides (2 steps - left - right) both ways and divide number of strides into 200 feet. This will give you your average stride. (Usually between 4 and 6 feet)

Campfire Areas and Programs

Introduction

Almost as numerous as the stars in a summer sky are the summer campfires of campers. In city parks, mountains, valleys, on ocean shores, and river banks, in desert and forest, the leaping flames light the faces of boys and girls living the adventure of camping. To many of them, the campfire is the highest point of their camping experience, and their campfire memories are lasting ones.

That is why campfires are such important events. All of those things we'd like to accomplish in camping can be helped by the magic of those dancing flames. It must have a purpose, direction, and a definite plan for what is to be accomplished.

To be truly successful a campfire must be more than just a program around a dancing flame.

The Campfire Area

The campfire area may be simple or elaborate, but should be in a scenic spot some distance from the camp area. Drainage protection from the wind, insects and fire hazards are very important considerations.

Construction should be rustic and appropriate for the terrain. Make sure that everyone can see and hear. For usually large crowds use lights (amber color) and a public address system if necessary.

The Campfire Program

Purpose:
What do you want to accomplish?

Planning:
Who? What? When? How?
A written program with copies for all concerned
(All stunts and stories must be checked and rehearsed)
(Off color or questionable stunts and stories have no place in a campfire program)
The four ingredients of a successful campfire properly mixed and blended will make the program successful.

Songs . . . . Stunts . . . . Stories . . . . . . Showmanship

Bibliography

1. Harbin, E. O. Fun Encyclopedia
Abingdon - Cokesbury Press Nashville, Tennessee

2. Harbin E. O. Games for Boys and Girls
Abington Press Nashville, Tennessee 1951

3. Games for Girl Scots Scouts of the United States of America
155 East 44th Street New York, New York 1949

4. Lotz, Marvin and Monahan, Douglas
Twenty Tepee Tales
Association Press New York, New York 1961

5. Macfarlan, Allen and Paulette
Fun with Brand New Games
Association Press New York, New York 1961

6. Monahan, Douglas Gamptivity Tips
Character Craft Publications Evanston, Illinois
1033 -35 University Place

7. Mulac, Margaret E. Games and Stunts for Schools, Camps and Playgrounds
Harper and Row Evanston, Illinois 1964

8. Reiley, Catherine Conway
Group Fun
Doad, Mead and Company New York, New York 1965

9. Sing Together - A Girl Scout Song Book
Girl Scouts of the U.S.A.
830 Third Avenue New York, New York 1957

10. Hicks, Dorothy Outdoor Education Through School and Camping Activities
January 1963

Some of the information presented here is taken from Literature and Guides which are available at Bradford Woods, the Outdoor Education Center for Indiana University, Martinsville, Indiana.

SCHOOL CITY OF GARY
Gary, Indiana

DEEP RIVER OUTDOOR EDUCATION CENTER
Summer Program
Physical Education - Recreation

ACTIVITIES:

- Swimming
- Boating
- Canoeing
- Sailing
- Fishing
- Archery
- Tennis
- Golf
- Horseshoes
- Riflery
- Hiking
- Badminton
- Volley Ball
- Lawn Bowling
- Croquet

EQUIPMENT AND SUPPLIES:

All above mentioned sports are life-time activities

Objectives and aims of each sport

Basic steps or procedures in teaching

INDOOR ACTIVITIES:

Ping pong - Quiet games - Stories - Stunts - Skits - Group singing

(All activities mentioned above will be inter-related with other areas of the curriculum as much as possible.)

SUMMER PROGRAM

OBJECTIVES:

1. To develop physical fitness (strength, endurance, agility, flexibility, balance and coordination)
2. To develop physical skills in games, athletics, sports, rhythms, and related physical education activities
3. To develop an appreciation of sports common to American culture
4. To develop neuro-muscular skills essential to effective living
5. To develop good health (physical and mental)
6. To develop emotional control and stability
7. To develop good sportsmanship
8. To develop desirable social traits of good character and citizenship
9. To develop good posture
10. To develop recreational interests

SWIMMING AND DIVING

CONTROL OBJECTIVES

I. Condition

Physiological capacity to swim adequately without undue fatigue certain specified distances.

The condition involves:

1. Kick with flutter kick at sprint speed for specified swimming distance.
2. Stroke with arm with sufficient power for sprinting specific distance.
3. Breath control for length of time actual swimming procedure requires.
4. Coordinated movement of arms, legs, and breathing in complex movement of swimming.

II. Skills

A. Skill in kicking:
   1) Flutter kick
   2) Flutter kick on back
   3) Scissors kick
   4) Frog kick

B. Skill in arm stroke:
   1) Overhead stroke
   2) Breast stroke
   3) Side stroke
   4) Elementary backstroke
   5) Overhand backstroke

C. Skill in rotary breathing:
   1) Inhale through mouth
   2) Exhale through nose

D. Skill in body position and buoyancy:
   1) Walking in water and maintaining balance
   2) Dead man's float
   3) Jellyfish float
   4) Regaining position
   5) Rhythmic bobbing
   6) Progressive bobbing
   7) treading water

        8) Plunge and glide, body extended, toes pointed
        9) Reverse position in water

    E. Skill in diving
        1) Sitting dive from edge of pool
        2) Squat dive from edge of pool
        3) Kneeling dive from edge of pool (one knee)
        4) Standing dive from edge of pool
            a. Initial stance and position
            b. Take-off and spring
            c. Body position
            d. Entry to water
            e. Recovery

III. Knowledge

1. Knowledge of sanitary habits regarding swimming
2. Knowledge of safety regulations
    a. In pool
    b. In open water
3. Knowledge of swimming meet regulations
4. Knowledge of terminology
5. Knowledge of conditioning factors

IV. Attitudes

1. Readiness to cooperate with teacher and fellow swimmers
2. Readiness to train and practice
3. Confidence in water
4. Adjustment to water, physically and mentally
5. Willingness to accept evaluation of progress

BOATING

CONTROL OBJECTIVES

I. Condition

Physiological capacity to row, canoe, or sail a boat with ease and enjoyment.

The condition involves:

A. Rowing a boat
  1) Straight
  2) Reverse
  3) Left or right turn
  4) Stopping
  5) Anchoring

B. Canoeing
  1) Straight
  2) Reverse
  3) Paddling
  4) Position in canoe
  5) Instability of canoe

C. Sailing
  1) Proper handling
  2) Sail maneuvering
  3) Rudder control
  4) Balance

II. Skills

A. Skill in rowing:
  1) Proper sitting position in boat
  2) Proper entering position
  3) Proper leg and arm position

B. Skill in canoeing:
  1) Proper sitting position in canoe
  2) Proper paddling position
  3) Proper balance at all times
  4) Proper use of paddle
  5) Proper method of embarking and disembarking from a canoe

C. Skill in sailing:
  1) Proper position in sailing boat
  2) Knowledge of winds
  3) Proper use of sail
  4) Proper use of rudder
  5) Proper safety measure concerning boom change according to wind shift

III. Knowledge

1. Knowledge of the history of boating
2. Knowledge of the rules of water travel
3. Knowledge of the care and selection of equipment
4. Knowledge of wind and air current
5. Knowledge of etiquette
6. Knowledge of various waters
7. Knowledge of areas to visit and sail or canoe

IV. Attitudes

1. Readiness to enjoy the tranquility of boating
2. Readiness to teach and encourage others
3. Readiness to participate in a skillful manner

FISHING

CONTROL OBJECTIVES

I. Condition

Physiological capacity to participate in fishing as a leisure-time activity.

1. Proper method of rowing a boat or canoe
2. Proper method of casting, fly fishing, trolling or bait fishing
3. Proper method of using bait casting plugs
4. Proper method of using flies in fly catching
5. Proper method of using bait
6. Develop endurance in shoulders for rowing and casting

II. Skills

A. Skill in bait casting:
   1) Stance, standing or sitting
   2) Grip
   3) Movement of rod

B. Skill in using in proper areas:
   1) Pond
   2) Lake
   3) Shoreline
   4) Stream

C. Skill in casting:
   1) Stance
   2) Grip
   3) Movement of rod
   4) Handling of line

D. Skill in boat fishing:
   1) Use of various baits
   2) Availability of various baits
   3) Equipment, pole, line and hook
   4) Species of fish caught

E. Skill in selection and use of lures:
   1) Various types
   2) Surface or under water
   3) Metal or wood
   4) Dry or wet flies or streamers
   5) Action applied to lures

III. Knowledge

1. Life cycle of various fish
2. Terminology
3. Care of equipment and its use
4. Health precautions
5. Knowledge of boating
6. Knowledge of water safety
7. Knowledge of weather
8. Knowledge of insects
9. Knowledge of conservation

IV. Attitudes

1. Ready to participate fairly at all times
2. An understanding and appreciation of fish and their habitat
3. Wise use of leisure time
4. Willingness to cooperate with others
5. Desire to be sportsmanlike
6. Desire to be courteous
7. Confidence near or on water
8. Aid to conservation
9. Love of the outdoors
10. Excitement of landing a big fish

ARCHERY

CONTROL OBJECTIVES

I. Condition

Physiological capacity to shoot accurately and at various targets.
Participation in archery as a leisure-time activity.

The condition involves:

1. Strength in arms for pulling string
2. Proper balance and stance
3. Proper position of feet and hands
4. Strength of back for correct standing position
5. Strength in fingers
6. Keen eyesight

II. Skills

- A. Skills in executing proper shooting technique:
  - 1) Stringing the bow
    - a. Step through bracing method
    - b. Lower tip against left foot, right arm at other tip, left arm pulling toward body
  - 2) Stand, draw and release
  - 3) Sighting
    - a. Keep sight
    - b. Telescopic
    - c. Natural
- B. Skills in various types of hunting:
  - 1) Animals
  - 2) Birds
  - 3) Fish
- C. Skills in tournament archery:
  - 1) Moving targets
  - 2) Distance
  - 3) Archery golf

III. Knowledge

1. History of archery
2. Rules
3. Terminology
4. Strategy
5. Care of equipment and its use
6. Training hints
7. Knowledge of hunting
8. Knowledge of conservation
9. Knowledge of prominent persons
10. Knowledge of outstanding tournaments and events
11. Knowledge of procedures in organizing team matches
12. Knowledge of correct scoring procedure

IV. Attitudes

1. Readiness to participate fairly at all times
2. An understanding of hunting
3. Wise use of leisure time
4. Desire to be sportsmanlike
5. Aid to conservation
6. Love of outdoors
7. Ability to get along with others
8. Desire to be courteous
9. Willingness to help others
10. Appreciation of archery

PLAYING TENNIS

CONTROL OBJECTIVES

I. Condition

Physiological capacity to play at least three continuous sets of tennis singles without undue fatigue or lowered level of skill.

The condition involves:

1. Running, with emphasis on constant and sudden stops, starts and changes of direction
2. Strength and flexibility of knees and ankles to protect them from the strains of sudden stops, starts and changes of direction
3. Strength and flexibility of wrist, elbow and shoulder to permit continued efficiency in executing the various tennis strokes
4. Acquired toughness of the skin on the feet and the racket hand, thereby permitting long and strenuous play without danger of blisters or other skin irritations

II. Skills

A. Skill in serving:
    1) The flat serve
    2) The slice serve
    3) The American twist serve

B. Skill in correctly executing the various tennis strokes:
    1) The forehand drive
    2) The backhand drive
    3) The forehand volley
    4) The backhand volley
    5) The forehand half volley
    6) The backhand half volley
    7) The overhead smash
    8) The lob
    9) The forehand chop
    10) The backhand chop

C. Skill in footwork while playing a tennis match

D. Skill in court strategy while playing a tennis match

III. Knowledge

1. Knowledge of recommended procedures in the selection and care of tennis equipment, including:
   a. Racket
   b. Racket strings
   c. Tennis balls
   d. Shoes
   e. Socks
   f. Shorts
   g. Shirt or blouse
   h. Jacket
   i. Wristlet
2. Knowledge of the skills involved in correctly executing the various tennis strokes
3. Knowledge of the rules of tennis
4. Knowledge of the terminology used in tennis
5. Knowledge of correct scoring procedure
6. Knowledge of the basic strategy of both single and double play
7. Knowledge of the procedures in organizing and conducting team matches and tennis tournaments
8. Knowledge of prominent personnel in the tennis world
9. Knowledge of the outstanding tennis events of each year (i.e. major national and international tournaments)

IV. Attitudes

1. Readiness to cooperate with the teacher and fellow players
2. Readiness to play fairly at all times
3. Readiness to accept willingly the decisions of the officials
4. Readiness to place sportsmanship above winning
5. Readiness to always play at top effort regardless of the apparent superiority or inferiority of an opponent
6. Readiness to train and practice regularly and conscientiously
7. Readiness to always show respect and courtesy toward players and officials when watching a tennis match

GOLF

CONTROL OBJECTIVES

I. Condition

Physiologic capacity to play 18 holes without undue fatigue or lowered level of skill.

The condition involves:

1. Running
2. Calisthenics for flexibility of knees and ankles, wrists, elbows and shoulders
3. Acquired toughness of the skin on feet and hands, permitting long and strenuous play
4. Strength, balance and follow through when hitting the ball

II. Skills

A. Skill in stance:
   1) Position of feet
   2) Position of hands
   3) Position of legs
   4) Proper grip

B. Skill in Backswing:
   1) Proper swing
      a. Backswing should be slow
      b. Drag club back about 6 inches and not more than 8 inches
      c. Care should be given not to exaggerate backward movement at expense of body position
      d. Let arms hang naturally
      e. Keep eye on spot just behind the ball

C. Skills in swing:
   1) Arms are straight but not rigid
   2) Left arm fairly straight
   3) Right arm to be pointing down at top of backswing
   4) Pause at top of swing
   5) Transfer of weight

D. Skill in downswing:
   1) Keep plane of downswing inside of plane of the upswing
   2) Relaxing of wrist to come naturally
   3) Left side should be firm
   4) Always use a complete follow through

E. Skill in use of various clubs:
   1) Skill in use of woods
   2) Skill in use of irons
   3) Skill in putting

III. Knowledge

1. Knowledge of the history
2. Knowledge of the rules
3. Knowledge of the terminology
4. Knowledge of courtesy and etiquette
5. Knowledge of how to keep score
6. Knowledge of its equipment and its use and care
7. Knowledge of prominent golfers group
8. Knowledge on going community golfing and participation
9. Knowledge of proper selection of equipment

IV. Attitudes

1. Readiness to cooperate with fellow golfers
2. Readiness to accept penalties
3. Readiness to participate fairly at all times
4. Readiness to act in a sportsmanlike manner
5. Readiness to give best effort regardless of the superiority or inferiority of an opponent
6. Readiness to show respect and courtesy toward players and officials as a spectator
7. Readiness to participate in golfing during leisure time

HORSESHOES

CONTROL OBJECTIVES

I. Condition

Physiologic capacity to play several matches of horseshoes without undue fatigue or lowered level of skill.

The condition involves:

1. Strength and flexibility of the wrist

2. Strength, balance, agility in controlled body movement

II. Skills

A. Skill in delivery - Types
   1) Side-spin rotation
   2) Overturn rotation

B. Skill in footwork:
   1) Movement away from post
   2) Balance and follow through

C. Skill in strategy - Singles and Doubles

III. Knowledge

1. Knowledge of recommended procedures in the selection and care of horseshoe equipment, including:
   a. Horseshoe
   b. Post - weight of horseshoe
   c. How to correctly install the pit
2. Knowledge of the rules for horseshoes
3. Knowledge of correct scoring procedures
4. Knowledge of the basic strategy of both singles and doubles

BADMINTON

CONTROL OBJECTIVES

I. Condition

Physiologic capacity to play at top performance throughout several badminton games of strenuous competitive nature.

The condition involves:

1. Strength and flexibility of the wrist
2. Running, quick stop and start strides
3. Strength, balance, agility to swiftly cover entire court and to make powerful strokes with perfect body control

II. Skills

A. Skill of grip of the racket and body stance:
   1) Fingers and thumb position
   2) Flexible wrist position
   3) Basic stance position

B. Skill in service:
   1) Stance
   2) Out of hand and/or toss service
   3) Short sleeve
   4) Long sleeve

C. Skill in forehand stroke:
   1) Stance
   2) Movement of racket

D. Skill in backhand stroke:
   1) Stance
   2) Movement of racket

E. Skill in overhand stroke:
   1) Stance
   2) Movement of racket

F. Skill in net strokes:
   1) "Lift" stroke: stance and racket movement
   2) Quick smash or drop stroke: stance and racket movement

G. Skill in footwork:
   1) "On guard" stance
   2) Pivot
   3) Movements away from the net
   4) Movements toward the net
   5) Return to original position

H. Skill in court coverage:
   1) Position play for single game
   2) Position play for double game

III. Knowledge

1. Knowledge of history of badminton
2. Knowledge of rules
3. Knowledge of selection and care of equipment
4. Knowledge of game terminology
5. Knowledge of bird flights and returns
6. Knowledge of game and stroke strategy
7. Knowledge of the etiquette of badminton
8. Knowledge of location of local facilities where badminton may be played

IV. Attitudes

1. Readiness to play in a sportsmanlike manner at all times
2. Readiness to help others gain skill
3. Enjoyment in playing badminton
4. Readiness to seek out opportunities to play badminton as a regular form of recreation

VOLLEYBALL

CONTROL OBJECTIVES

I. Condition

Develop a capacity to play for 30 or more minutes.

1. Running, constant and sudden stops, starts and changes of direction
2. Strength and flexibility of knees and ankles to protect them from strains
3. Strengthen wrists, elbows and shoulders for proper coordination
4. Toughen up skin on bottom of feet so that an individual may play for long periods

II. Skills

A. Skill in serving the ball:
   1) Underhand serve
   2) Overhand serve
   3) Short serve
   4) Long serve

B. Skill in ball return:
   1) Two handed
   2) One handed
   3) Lateral movement

C. Skill in footwork:
   1) Footwork
   2) Movement away from net
   3) Movement toward the net
   4) Return to original position

D. Skill in court coverage:
   1) Position play

III. Knowledge

1. Knowledge of the history of volleyball
2. Knowledge of the history of rules
3. Knowledge of the selection and care of equipment
4. Knowledge of the terminology
5. Knowledge of etiquette of volleyball
6. Knowledge of local facilities

IV. Attitudes

1. Readiness to play in a sportsmanlike manner
2. Teach others the skill and enjoyment
3. An excellent form of recreation

LAWN BOWLING

I. Condition

Physiologic capacity to participate in bowling as a leisure-time activity.

The conditions involve:

1. Strength in arm to bowl
2. Strength balance and agility to make the proper approach, delivery and follow through
3. Strength and flexibility of the wrist to control the bowling ball
4. Strength and flexibility of the ankles and knees to protect them from the braking action of the feet after the release phase of the delivery
5. Strength of the back to maintain correct bowling position

II. Skills

A. Skill in delivering the ball:
  1) Backswing
  2) Release
    a. Straight ball
    b. Curve ball
    c. Hook

B. Skill in stance:
  1) Position of feet
  2) Holding the ball
  3) Position at the foul line according to delivery

III. Knowledge

1. Knowledge of the history of lawn bowling
2. Knowledge of the history of rules
3. Knowledge of the history of terminology
4. Knowledge of courtesy and etiquette
5. Knowledge of scoring
6. Knowledge of equipment
7. Knowledge of prominent bowlers
8. Knowledge of game community bowling groups for later participation
9. Knowledge of league bowling procedures

IV. Attitudes

1. Cooperation with others
2. Acceptance of penalties
3. Readiness to participate fairly at all times
4. Readiness to act in a sportsmanlike manner in victory or defeat
5. Readiness to give utmost effort
6. Readiness to follow instructions
7. Readiness to show respect and courtesy toward players and officials
8. Readiness to participate in bowling during leisure time

wj